

Manufacturers Record

Industry Office Construction



\$6.50 per Year
Single Copy, 20 Cents

Baltimore, Md.
JUNE 25, 1931



A Constructive Force

We are heading out of the depression even though the economic sky is not altogether clear. No one can believe this country has reached the limit of its development. The future will disclose that previous progress has been only a step in the greatest growth that mankind has witnessed. It is timely to think of this and to act with more determination than has been manifested lately.

One of the things for which other countries envy us — a course that has made possible to a large degree the wonderful progress of America — is our recognition of the value of advertising and the impressive way in which the advertising of the merchants of this country has been done.

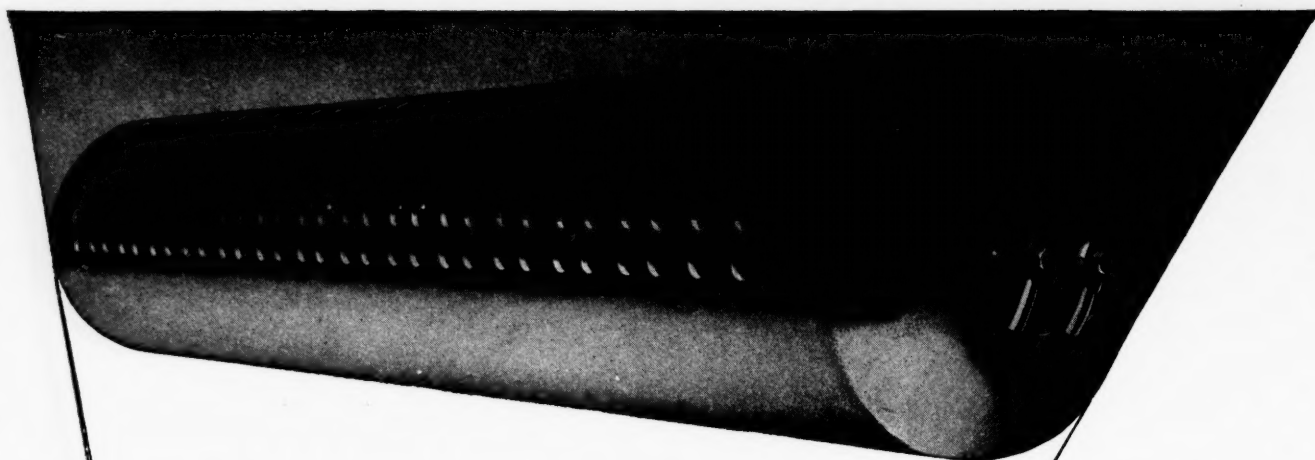
It is a force that can be exerted now to special advantage in stimulating activity and restoring confidence. Volume of sales among consistent advertisers, whether storekeepers or manufacturers, even in one of the worst periods of trade dullness the country has known, has held up remarkably well in comparison with former years and in striking contrast with sales of non-advertisers.

This great force, instead of being withdrawn—as it has been to a considerable degree—in a time of dullness should be increased, but the same lack of confidence apparent in other directions is seen among advertisers whose surpluses are still abundantly large to enable them to make an investment that will be returned over and over again in the future.

A temporary abandonment of the policy of aggressive advertising is an economic error. Even in times of depression it is an essential policy for private business. Public bodies, and the great upbuilders of national wealth to whom communities and states look for leadership, should constantly call the attention of their own communities and the people of the area in which they operate to the work they are doing for public benefit, as well as to reiterate the advantages of their territory for the manufacturer and the investor.

It is time for industry generally and local business and civic bodies to have confidence in the future of America.

The Advertising Convention in New York last week heard very definite evidence from national and international authorities of the importance of advertising as a force immediately available for building confidence and sales.



Fusion Welded

*and all main welded seams
X-Ray tested for soundness*

Fusion Welding.

The Application of Fusion Welding to Pressure Vessels.

Testing Welded Construction During Production.

Scientific Control in Welding of Boiler Drums.

Develops New Technique in Electric Arc Welding.

Outlook for Welded Boiler Drums Brightens.

Advocates Electric Welding of Boilers.

Welded Boilers.

X-Ray Inspection of Welds in Pressure Vessels.

This all welded boiler drum was fabricated for The Brown Paper Mill, Incorporated, of Munroe, Louisiana. All main longitudinal and circumferential seams of this thirty-six inch diameter drum were welded by the new Babcock & Wilcox process and every inch of every seam has been examined with a powerful X-Ray machine to provide definite proof of the soundness of the welds which are consistently equal to or better than A. S. M. E. boiler plate in tensile strength, ductility, shock resistance, and ability to withstand repeated applications of pressure.

The Company's bulletin *Fusion Welding* describes in detail the characteristics of welds produced by this new technique and shows the tests employed to check the soundness of welds in finished products of all types. In addition to this book, The Babcock & Wilcox Company will send, without obligation, a series of articles on fusion welding written by leading writers for the technical press.



Pending adoption of the proposed A. S. M. E. Code for welded boiler drums The Babcock & Wilcox Company offers this construction only in Non-Code States and subject to the approval of the boiler insurance companies.

THE
BABCOCK & WILCOX
COMPANY
85 LIBERTY ST. NEW YORK, N. Y.

Entered as second-class matter at the Postoffice, Baltimore, Md., under the act of March 3, 1879.

BUILT TO MEET ALL CONDITIONS

-NOT AROUND ONE FEATURE

Simplicity itself!

Only two main shafts!
Only thirteen gears above the deck!
Only one engine!
No chains to stretch!
Drums hung low bringing greater stability and accessibility!
High speed shafts mounted on ball bearings on rigid steel castings, not to be compared with weaving "A" frames!

A crowd for rock!

Handles 25% harder digging!
Digs without the 25% loss of power always present where separate mechanisms are used to hoist and crowd!
Delivers 25% more power at the dipper lip!
— and brings independent reach beyond the boom without the hoist cable pulling against the crowd!

A crawler for the hardest going!

The Northwest patented crawler base gives you positive traction while turning as well as while going straight ahead!
It steers without swinging the cab!
Small diameter rollers form a firm foundation for every tread and keep them from jamming up when traveling over rails and stones!

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NORTHWEST ENGINEERING CO.
1733 Steger Bldg., 28 E. Jackson Blvd., Chicago, Ill., U. S. A.

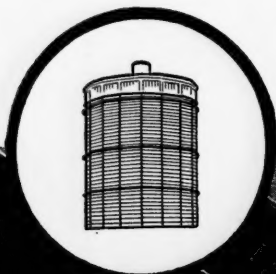
Atlanta, Ga.: 351 Whitehall Street
Dallas, Texas: 1221 S. Lamar Street
New Orleans, La.: 816 Howard Ave.

Memphis, Tenn.: Second at Butler
St. Louis: 1325 Macklind Avenue
Baltimore, Md.: 15 W. Franklin St.

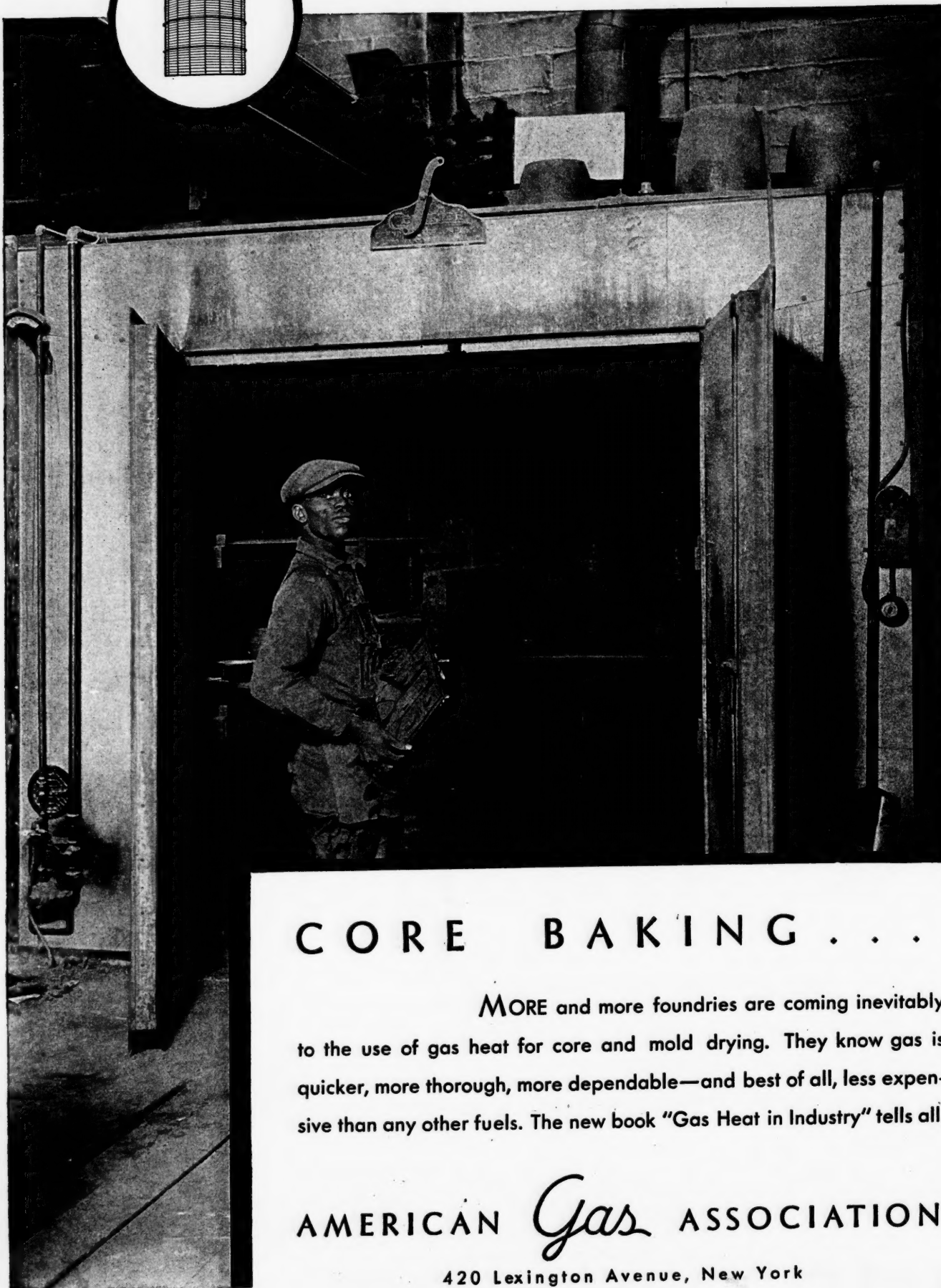
The world's largest exclusive builders of gasoline, oil burning and electric powered shovels, cranes and draglines

HANDLE
25%
HARDER
DIGGING

NORTHWEST



GAS FOR HEAT WHEREVER HEAT IS NEEDED



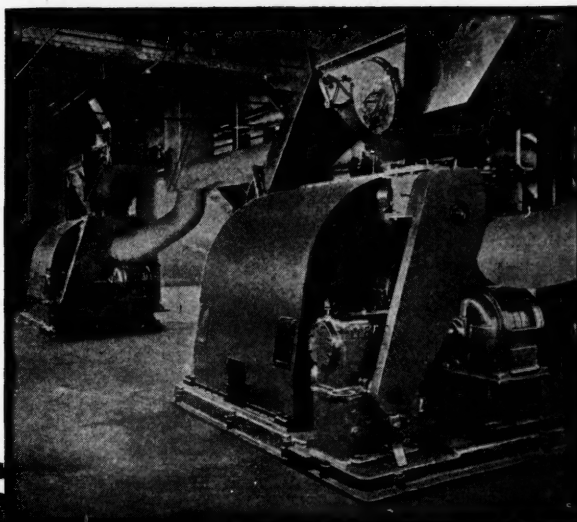
CORE BAKING . . .

MORE and more foundries are coming inevitably to the use of gas heat for core and mold drying. They know gas is quicker, more thorough, more dependable—and best of all, less expensive than any other fuels. The new book "Gas Heat in Industry" tells all.

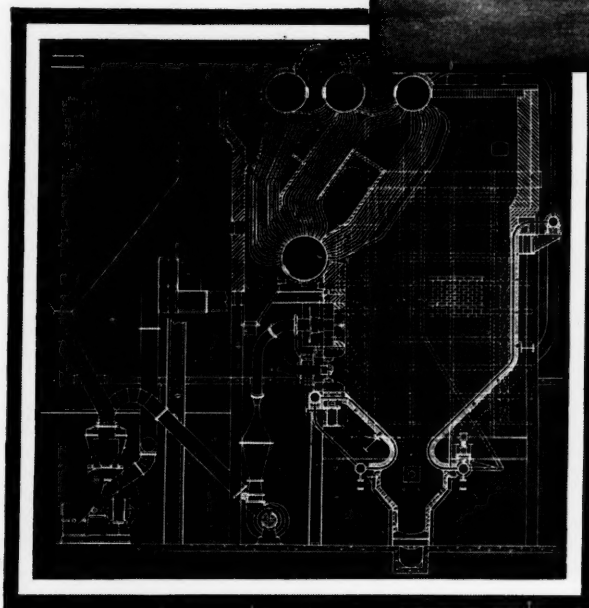
AMERICAN *Gas* ASSOCIATION

420 Lexington Avenue, New York

WIDE STEAM DEMAND MET WITH PULVERIZED-COAL FIRING



The two large-capacity Fuller-Bonnot Pulverizers at Eddystone.



Arrangement of the boiler and Fuller Lehigh Equipment at the Eddystone, Pa., plant of the General Steel Castings Corporation. Bailey Water-Cooled Furnace Construction is used for the rear walls and hopper bottoms of the furnaces. Each boiler generates 71,800 pounds of steam per hour at 150 lbs. per sq. in. pressure.

WINTER PEAK OF 125,000 POUNDS PER HOUR DROPS TO 4200 POUNDS IN SUMMER

AT the Eddystone, Pa., plant of the General Steel Castings Corporation, steam is used for oil atomization in the open-hearth and annealing furnaces and for factory heating. The demand for steam on extremely cold days in winter may reach 125,000 pounds per hour. The load, however, drops to 4200 pounds per hour during the summer months.

A boiler plant of great flexibility is needed to meet this wide variation in load. The boilers must operate continuously at high rating and efficiency during the winter and work satisfactorily at a fraction of normal rating in summer.

The Fuller Lehigh Direct-Fired Pulverized-Coal System and Bailey Water-Cooled Hopper-Bottom Furnaces were selected for the two

Stirling Boilers as the most suitable equipment to meet these conditions. Each boiler is served by one large pulverizer for high-capacity operation and a small mill is used with either boiler at light loads.

Furthermore, the normal operating force at this plant consists of two men—a shift engineer and a helper. The pulverizing equipment is controlled by push buttons, thus exemplifying the high degree of flexibility that can be incorporated in the system.

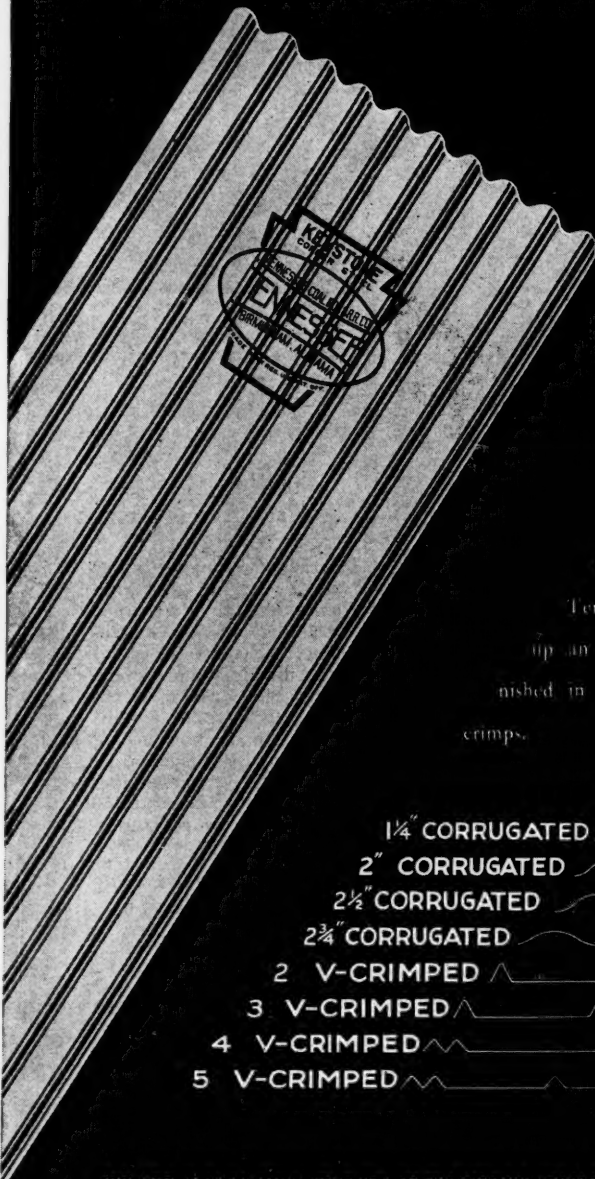
Write for a copy of Reprint 5-78. It contains full particulars of this interesting installation.

FULLER LEHIGH COMPANY
A Babcock & Wilcox Organization
85 LIBERTY ST., NEW YORK, N.Y.

FULLER LEHIGH

PULVERIZED-COAL EQUIPMENT ~ WATER-COOLED FURNACE WALLS

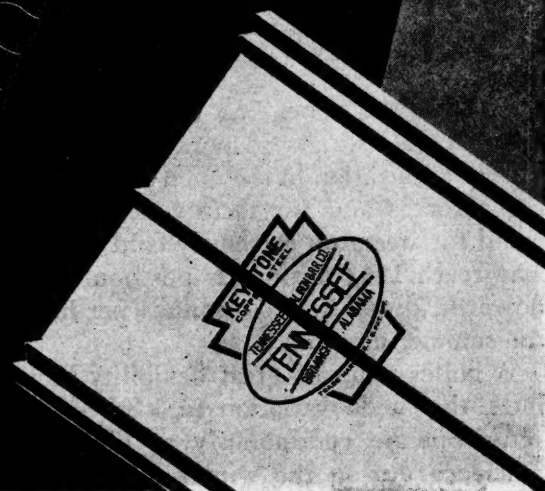
TENNESSEE SHEETS



Produced on modern mills and manufactured with an emphasis on quality, Tennessee Galvanized Sheets have built up an enviable reputation. Can be furnished in the following corrugations and crimps.

- 1 1/4" CORRUGATED
- 2" CORRUGATED
- 2 1/2" CORRUGATED
- 2 3/4" CORRUGATED
- 2 V-CRIMPED
- 3 V-CRIMPED
- 4 V-CRIMPED
- 5 V-CRIMPED

WE ARE ALSO MANUFACTURERS OF TENNESSEE OPEN HEARTH BLUE ANNEALED, BLACK AND SPECIAL FINISH SHEETS



TENNESSEE COAL, IRON & RAILROAD COMPANY

General Offices: Brown-Marx Building, Birmingham, Ala.

Subsidiary of United States Steel Corporation

AMERICAN BRIDGE COMPANY
AMERICAN SHEET AND TIN PLATE COMPANY
AMERICAN STEEL AND WIRE COMPANY
CARNEGIE STEEL COMPANY

PRINCIPAL SUBSIDIARY
COLUMBIA STEEL COMPANY
CYCLONE FENCE COMPANY
FEDERAL SHIPBUILDING AND DRY DOCK COMPANY

MANUFACTURING COMPANIES
ILLINOIS STEEL COMPANY
MINNESOTA STEEL COMPANY
NATIONAL TUBE COMPANY

OIL WELL SUPPLY COMPANY
THE LORAIN STEEL COMPANY
TENNESSEE COAL, IRON & R. R. COMPANY
UNIVERSAL ATLAS CEMENT COMPANY

Pacific Coast Distributors—Columbia Steel Company, Russ Building, San Francisco, Calif.

Export Distributors—United States Steel Products Company, 30 Church Street, New York, N. Y.



**GRANITE CITY
STEEL CO.**
GRANITE CITY ILLINOIS

Stack Steel

EACH use of a product demands some special quality making it peculiarly suited to that particular job. Careful shearing for example is a prerequisite for stack steel.

Granite City Steel sheared with unusual care and precision provides for well-fitted, easily-riveted or welded joints.

And, metallurgically, this steel offers every guarantee of long life and trouble-free service.

Prompt delivery to the Mississippi Valley, the West and the Southwest is assured through a convenient plant location at Granite City, Illinois.

Chicago, Dallas
Kansas City
Los Angeles



St. Louis, St. Paul
San Francisco
Salt Lake City

**GALVANIZED, BLUE-ANNEALED
AND BLACK SHEETS . . .
PLATES AND TIN PLATE**



IT is a far cry from the little red schoolhouse of our fathers' time to the magnificent new 40-story Cathedral of Learning of the University of Pittsburgh. This imposing structure not only typifies the advance in education, but the great progress in building construction as well. It is fitting indeed that in the City of Steel, its University should be housed in the most spectacular contribution Steel has made to this generation . . . the skyscraper.

CB Sections, representing the most recent improvement in structural steel, were used in the construction of the Cathedral of Learning. A vast number of important educational structures throughout the country testify to the popularity and merit of CB Sections.

Charles Z. Klauder, Architect
H. G. Balcom, Structural Engineer
McClintic-Marshall Corporation, Fabricators
John L. Mullen Construction Company, Erectors
Stone & Webster Engineering Corporation,
Supervision of Construction

CARNEGIE STEEL COMPANY, PITTSBURGH, PA.

Subsidiary of United  States Steel Corporation

141

CB SECTIONS



VIRGINIA BRIDGE

Presents

TODAY'S AND TOMORROW'S—BRIDGES

An Epic in Six Pictures



Heavy traffic requires strong bridges, wide rivers, long spans. We want to get "across the river" quick, older methods are too slow. Also we want to be sure we can get across anytime and all the time.

As in the case of the skyscraper, steel and the steel engineer and builder have made possible our long-span bridges thereby keeping clear a wide channel in navigable waterways and also avoiding the hazards of deep water foundations.

More and more State highway departments have been enabled to connect up important routes with a safe dependable steel bridge, good for today and many tomorrows.

Our Company has had a considerable part in this, just as it has had in steel bridge and building construction generally throughout the South and West for nearly 40 years.



VIRGINIA BRIDGE & IRON CO.

Roanoke Birmingham Memphis Atlanta New Orleans
New York Los Angeles Charlotte Dallas El Paso

**400 TONS OF GULFSTEEL
ANGLES AND UNIVERSAL PLATES**

**1055 SQUARES OF GULFSTEEL
GALVANIZED SHEETS**



REG. U. S.
PAT. OFF.

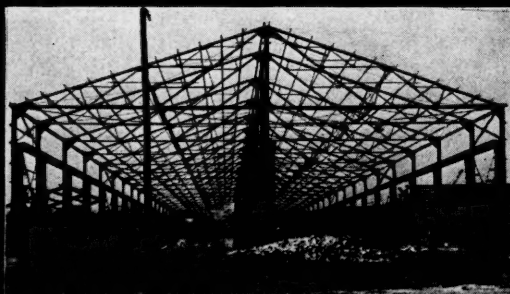
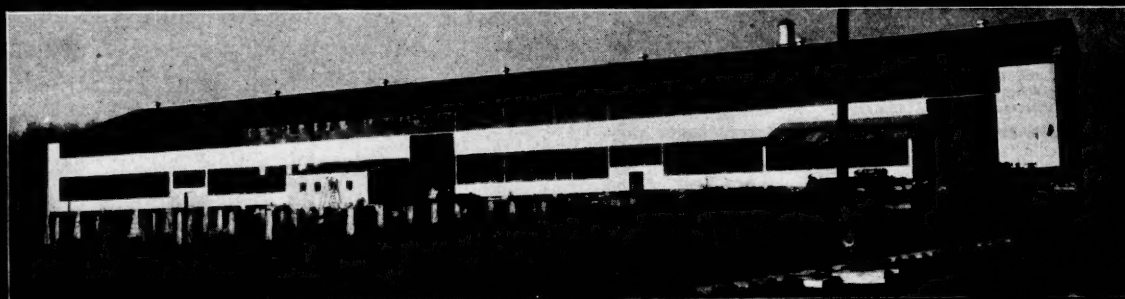
"SAVE WITH STEEL"

used for the new plant of the

WHOLESALE GRANITE COMPANY

ATLANTA GEORGIA

Designed, fabricated and erected by
Converse Bridge & Steel Company, Chattanooga, Tenn.



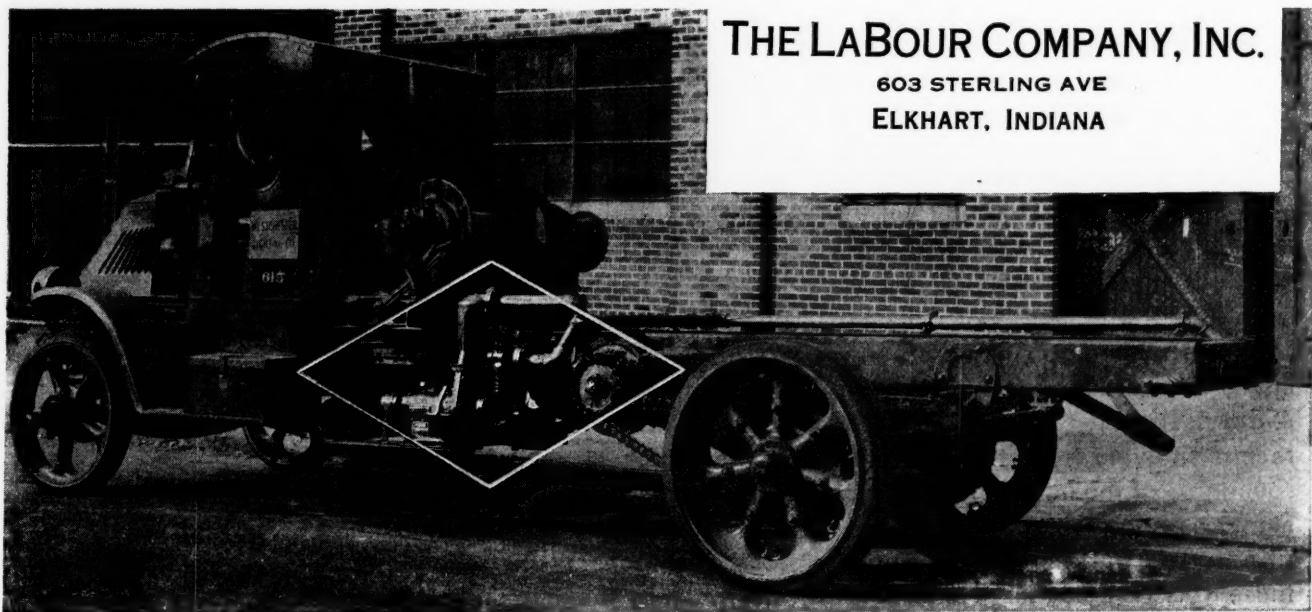
Gulfsteel Plates, Bars, Angles, and Sheets are playing an increasingly larger part in Southern building. Contractors have found that they can rely on GULFSTEEL for steel products, with personality, rolled to suit individual needs. Send us your inquiries.
GULF STATES STEEL COMPANY, BIRMINGHAM, ALABAMA

GULFSTEEL

THE extreme simplicity and the sturdy durability of LaBour Self-Priming Centrifugal Pumps make these pumps the logical choice for applications such as the one illustrated on this page. Here an ordinary LaBour Pump is mounted on the side of a truck and connected through a transmission with the power plant of the truck itself. It is used for pumping out man-holes and for other types of work of like nature.

The Silent Hoist Winch & Crane Company of Brooklyn, N. Y., installed the pump shown below and provided the transmission through which it is connected to the truck motor. This is but one of several trucks which have been so equipped for the customers of the Silent Hoist Winch & Crane Co. In every case the LaBour Pump has given excellent service.

Full particulars about this and other applications of the simple and reliable LaBour Pumps will be furnished at your request.

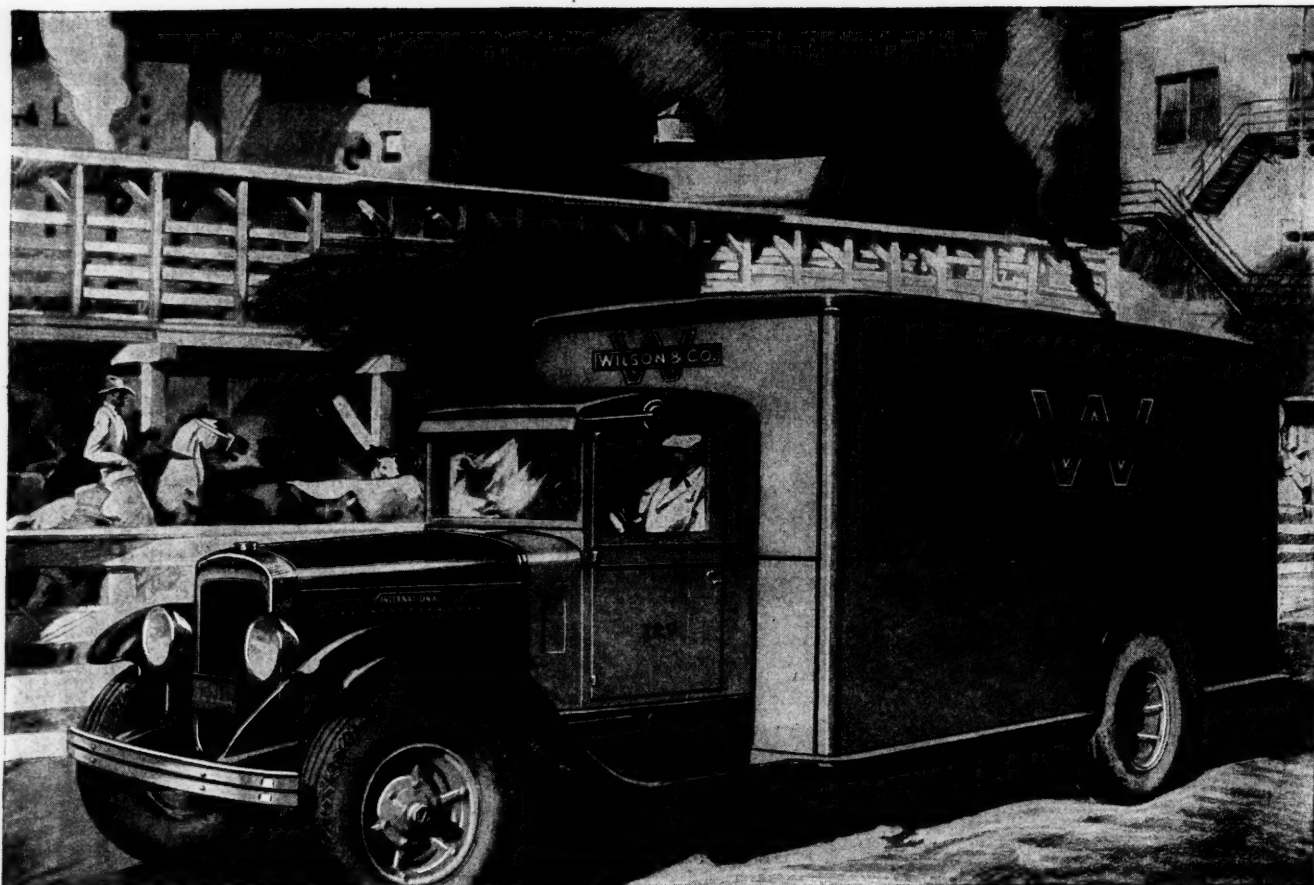


THE LABOUR COMPANY, INC.

603 STERLING AVE
ELKHART, INDIANA

LA BOUR PUMPS

NEVER LAY DOWN ON THE JOB



The Packers Know a Good Investment

Wilson & Co., famous packers, use International Trucks. They bought their first Internationals five years ago. Since that time they have repeated to the extent of 140 trucks . . . and 138 of these are still in active service today.

Wilson & Co. send these trucks to their many branches throughout the country. "Once an International has been put in service by a branch," the home office tells us, "that's the last we seem to hear of it, and no news in this case is the best kind of news." A detailed daily cost-and-upkeep record on every truck testifies to the soundness of the International investment . . . and to remarkably low operating costs and upkeep. Some of these trucks run 200 miles or more per

day . . . well over 60,000 miles a year.

International Trucks are highly favored in the packing industry. Swift, Armour and Cudahy use them and so do other packers the country over. There is only one answer . . . Internationals give, unfailingly, the fast, reliable transportation upon which the success of the packing industry largely depends . . . and give it economically!

That is one industry. International Trucks meet the transportation needs of every industry. Your trucking needs may be different . . . but they are no exception to this rule! Every International meets the constant common demand for sound economy and solid dependability . . . by the mile and by the ton.

**182
International
Company-Owned
Branches
in the United States
and Canada**

render exceptional service for widespread organizations or for single unit users.

♦ ♦ ♦

There is a full line of International Trucks, from 3/4-ton to 5-ton. Request a demonstration and one will be arranged immediately—a convincing demonstration, on your own job.

INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. **OF AMERICA** Chicago, Illinois
(INCORPORATED)

INTERNATIONAL TRUCKS

★

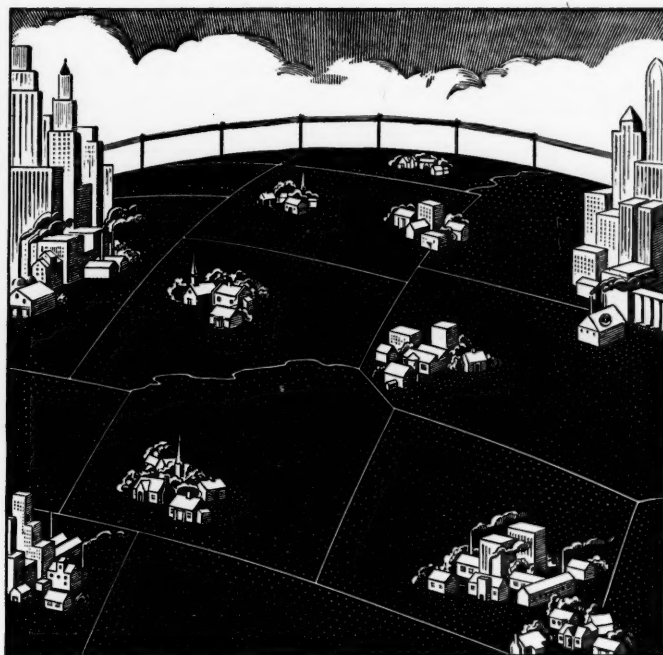
★

Your telephone gets things done

QUICKLY at low cost



Doing business by telephone saves time, money. Out-of-town calls are as definite and as satisfactory as across-the-desk conversations.



Your Long Distance telephone call takes you "there and back" in minutes. It is today's economical way of transacting inter-city business.

THE TELEPHONE brings together men who have the authority to act. This is one reason a Long Distance call results so often in a completed transaction. In the space of minutes you can give or receive information . . . settle problems . . . conclude all arrangements. Whatever your question concerns—sales or purchasing, production, administration, credit, traffic—you get action.

This is vital in meeting today's keen competition. The telephone simplifies all merchandising operations. Attunes production to customers' requirements. Speeds deliveries. Reduces expensive stock-on-hand.

The sales manager of a large middle western corporation terms Long Distance

"very cheap sales expense." An official of a New England specialty corporation writes: "Were it not for efficient telephone service, we would be more seriously handicapped than I would care to imagine." A southern textile company: "Telephone service to other cities is one of our most useful tools."

The telephone eliminates the handicap of distance. It brings people "into your office" when you want them.

Rates are very low. Typical day station-to-station charges: Atlanta to Jacksonville, \$1.35. Denver to Pittsburgh, \$4.75. Detroit to Cleveland, 60 cents. A telephone call gets things done . . . *quickly . . . easily . . . inexpensively.*



DIRECTORY

ARCHITECTS

ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

Milburn, Heister & Co.

Architects

WASHINGTON, D. C.

Wm. J. J. Chase, A. I. A.

Architect

Public and Commercial Buildings

140 Peachtree St. ATLANTA, GA.

G. Lloyd Preacher & Co., Inc.

Architects and Engineers

501 Mortgage Guarantee Bldg.

ATLANTA, GA.

B. Russell Shaw Co.

INCORPORATED

Consulting and Designing Engineers
AIRPORTS—AIRLINES

Arcade Bldg., ST. LOUIS, MO.

J. B. Converse & Co., Inc.

Engineers

Industrial Investigations, reports,
plans, estimates, supervision.

MOBILE, ALA.

Charlton & Davis

Civil Engineers

MIAMI FORT LAUDERDALE
WEST PALM BEACH

Elroy G. Smith

Consulting and Designing
Civil-Hydraulic EngineerIndustrial Hydro-Electric Development
a Specialty
313-313-A Herald Bldg.,
AUGUSTA, GA.

Hornbuckle Contracting Co.

INCORPORATED

Municipal Improvements
Industrial Village Utilities

ATLANTA, GA.

Harza Engineering Co.

Consulting Engineers

Dams, Hydraulic, Hydro-Electric, Flood
Control and Sanitary Projects
20 N. Wacker Drive
CHICAGO

S. E. Huey

Consulting Engineer

Civil, Structural, Natural Gas

Ouachita Bank Bldg., MONROE, LA.
City Bank Bldg., SHREVEPORT, LA.

J. E. Greiner & Company

Consulting Engineers

Design, Construction, Investigation, Ad-
visory Service—Bridges, Docks, Piers,
Warehouses and other Engineering
Structures.

1201 St. Paul St., BALTIMORE, MD.

Whitman, Requardt & Smith

Engineers

Water Supply, Sewerage and Structural
Engineering, Reports, Designs,
Valuations.Baltimore Trust Bldg., BALTIMORE, MD.
ATLANTA, GA. ALBANY, N. Y.

Chas. T. Main, Inc.

Industrial Engineers

Mills, Warehouses, Complete Develop-
ments.
Electrical, Steam and Water Power
Reports Appraisals
201 Devonshire St. BOSTON, MASS.

C. A. P. Turner

Consulting Engineer

M. Am. Soc. C. E. Reinforced concrete
and Structural Steel Bridges, Buildings,
and Manufacturing Plants.
300 Builders Exchange Bldg.
MINNEAPOLIS, MINN.

Walter H. Wheeler

M.A.S.C.E. and M.E.

Engineers

Mfg. Plants, Buildings, Bridges, Dams.
1000 Met. Life Bldg.,
MINNEAPOLIS, MINN.

Consoer, Older & Quinlan, Inc.

Mems. A. S. C. E.

Consulting Engineers

Water Supply—Sewerage—Industrial
Engineering
317 N. 11th St. ST. LOUIS, MO.
205 W. Wacker Drive, CHICAGO, ILL.

Kansas City Bridge Co.

Established 1893

Builders of Railroad and
Highway Bridges
River Improvement Work
General Office, 215 Pershing Road (Union
Station Plaza), KANSAS CITY, MO.

William S. Lee

Mem. Am. Soc. C. E.; Mem. Am. Soc.
M. E.; Mem. Eng. Inst. Can.; Fellow
Am. Inst. E. E.

Consulting Engineer

535 Fifth Ave. NEW YORK CITY
CHARLOTTE, NORTH CAROLINA

MacElwee & Crandall, Inc.

Investigations, Reports, Design, Super-
vision—Port Development, Piers, Ter-
minals, Airports, City Planning, Water
Front, Reclamation, Industrial Surveys
Main Office:
134 Main Street 11 West 42nd Street
CAMBRIDGE, MASS. NEW YORK CITY

Morris Knowles, Inc.

Engineers

Water Supply and Purification, Sewer-
age and Sewage Disposal, Valuations,
Laboratory, City Planning.
PITTSBURGH, PA.

Gardner & Howe

Structural Engineers

Steel and Reinforced Concrete Buildings,
Bridges and Viaducts
Porter Bldg. MEMPHIS, TENN.
Kirby Bldg. DALLAS, TEXAS

Freeland, Roberts & Co.

Consulting Engineers

Concrete and Steel Structures

NASHVILLE, TENN.

C. N. Harrub Engineering Co.

Member Am. Soc. C. E.

Civil and Sanitary Engineers

Water Supply, Sewerage, Paving and
Structural Improvements
705-9 Fourth & First Nat'l Bk. Bldg.
NASHVILLE, TENN.

Engineering Service Corp.

Consulting Engineers

Civil-Electrical-Mechanical-Refrigeration
COLD and DRY STORAGE WAREHOUSE
DESIGNS
Reports—Appraisals—Designs—Surveys
Docks and Harbor Designs—Ind. Engr.
Water Sup.—Sewer Sys.—Oil and Gas Lines
HOUSTON, TEXAS, U. S. A.

Gilbert C. White Co.

Consulting Engineers

Waterworks Paving
SewerageRICHMOND, VA.
DURHAM, N. C.

Robert Cramer

Consulting Engineer

Sewage Disposal Plants and Sewerage
Systems—Utilization and Disposal of
Industrial Wastes. Power Plants.
Design, Construction, Operation, Labora-
tory Service, Valuations and Reports.
647 W. Virginia St.,
MILWAUKEE, WIS.

Smallman-MacQueen

Construction Co., Inc.

Engineers and Contractors

BIRMINGHAM, ALA.

T. C. Thompson and Bros.

Incorporated 1895

General Contractors and Builders

BIRMINGHAM, ALA.
CHARLOTTE, N. C.

Algernon Blair

Contractor

MONTGOMERY, ALA.

Southern Erectors, Inc.

Steel Erectors

ATLANTA, GA.
TAMPA, FLA.

Walker Electrical Company

Electrical Contractors

General Offices: ATLANTA, GA.

Sales Offices:
ATLANTA, GA. COLUMBUS, GA.
GREENSBORO, N. C.

Hoosier Engineering Company

100 W. Monroe St., CHICAGO

Erectors of Transmission Lines

Electric—Gas—Oil

Smith Tower 225 Broadway
SEATTLE, WASH. NEW YORK, N. Y.

J. V. & R. T. Burkes, Inc.

General Contractors

MEMBER A. G. C. NEW ORLEANS

John Eichleay, Jr. Co.

Steel Construction

Structural Steel

House Raising and Moving
Shoring and Foundation Work
South 20th & Wharton Sts.
PITTSBURGH, PA.

Webb Electric Company

Electrical Contractors

Industrial, Commercial and Institutional
Electrical Installations.

ANDERSON, S. C.

Fiske-Carter Construction Co.

General Contractors

GREENVILLE, S. C.
SPARTANBURG, S. C.

Poe Piping & Heating Co.

Contractors

For Power Piping, Heating and
Sprinkler Systems

108 S. Main St. GREENVILLE, S. C.

Lee A. Gridley Construction Co.

General Construction

CRANE SERVICE—FOUNDATIONS

KNOXVILLE, TENN.

Steel & Lebbey

JOHN A. STEEL, JR.

THOS. D. LEBBEY

Engineers and Contractors

The design and erection of concrete and
steel structures.
Holston Bank Building,
KNOXVILLE, TENN.

The Warner Service Company

Electrical and Mechanical
ContractorsCor. Clinch and Central Ave.
KNOXVILLE, TENN.

Charles W. Alpaugh & Sons

Hydraulic and Construction Engineers

Dams a Specialty: Investigations,
Estimates Free

MANASSAS, VA.

Virginia Engineering Co., Inc.

General Contractors

Government — Municipal — Industrial
Buildings — Power Plants — Heating
Plumbing — Electrical — Highways
Sewer and Water Systems — Dams
Fire Protection — Refrigeration
1st Nat'l Bk Bldg.
NEWPORT NEWS, VA.

The John W. Cowper Co., Inc.

General Contractors

State Planters Bank Bldg.
RICHMOND, VA.

J. L. Myers & Sons

Drillers of Shallow and Deep Wells
in the South Since 1894Box 105, T. C. Station
DENTON, TEXAS

Audit Company of the South

Charles James Metz

President

Mem. American Institute of Accountants
Certified Public Accountant of Georgia
ATLANTA, GA.

Joe B. Martin

Quantity Surveys

CHARLOTTE, N. C.

Sixteen Years Actual Experience

The Howard-Hickory Co.

Nurserymen

Landscape Gardeners

Correspondence

solicited
HICKORY, N. C.

FAMILIARIZE yourself
with the SOUTH'S prog-
ress by reading the MANU-
FACTURERS RECORD.

DIRECTORY

ARCHITECTS

ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

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The Picard Laboratories

Chemists and Inspecting Engineers
Inspection of Cast Iron Pipe, Structural Steel, Cement, Railroad Equipment, etc.
Chemical Analysis of all kinds.
Representation in all Principal Offices
Clark Building, BIRMINGHAM, ALA.

W. Wade Moss, Jr.

Chemist
Research and Creative Laboratories
Development of Industrial Processes
Special attention given to exploration of Natural Resources of Southern States.
Lynch Bldg. COLUMBUS, GA.

Stillman & Van Siclen, Inc.

Chemists and Chemical Engineers
Analysis and Inspection of Asphalt, Paving Materials, Cement, Concrete Building Materials.
227 Front Street NEW YORK
BECKMAN 5261

Barrow-Agee Laboratories, Inc.

Chemists and Engineers
Analysis tests and inspection of all building and construction materials.
MEMPHIS, TENN.
LITTLE ROCK, ARK.
JACKSON, MISS. SHREVEPORT, LA.

William R. Conard

Inspection and Tests of Materials of Engineering and Construction
Reports, Designs, Supervision
Construction
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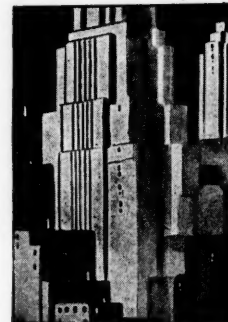
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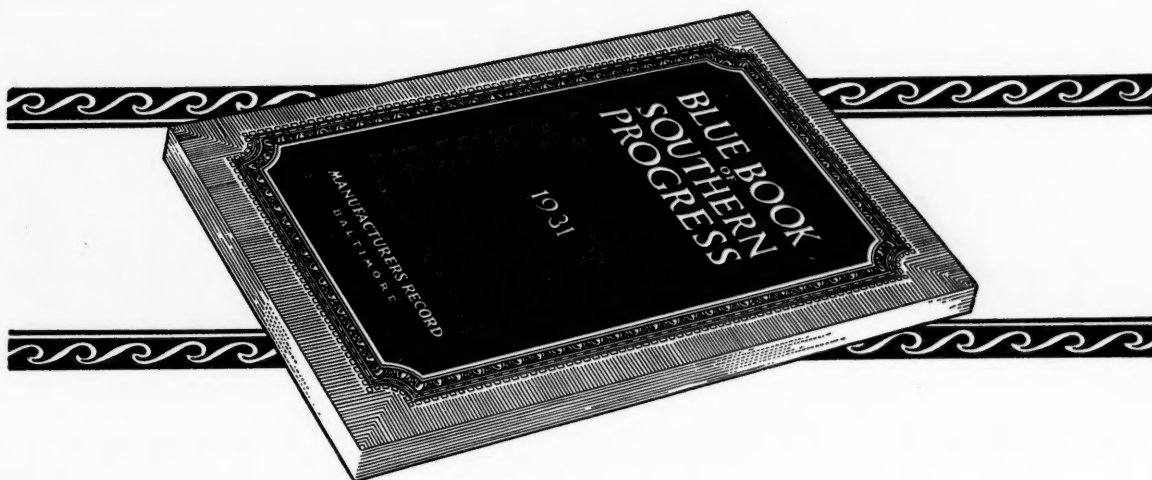
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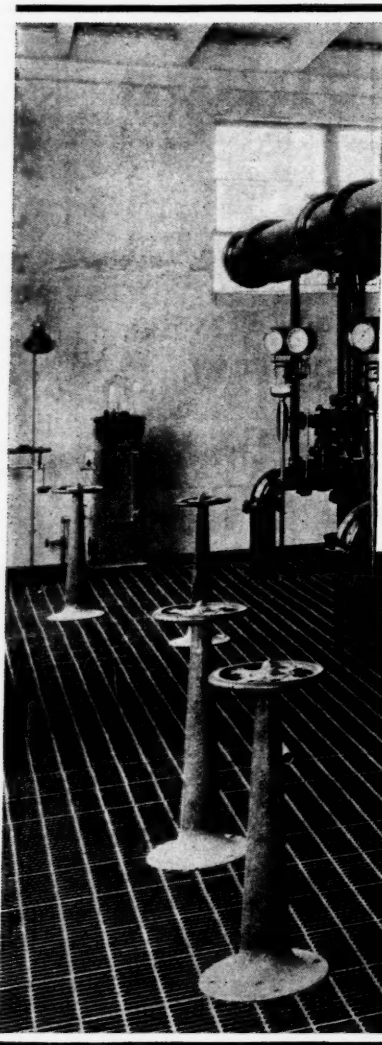
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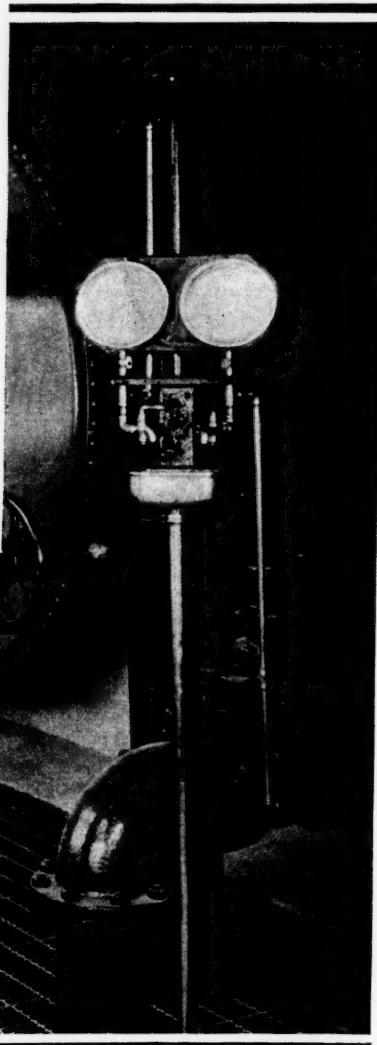
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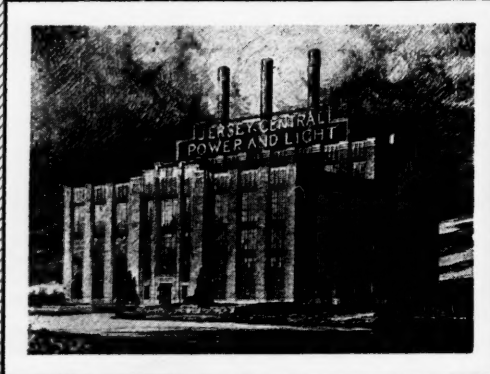
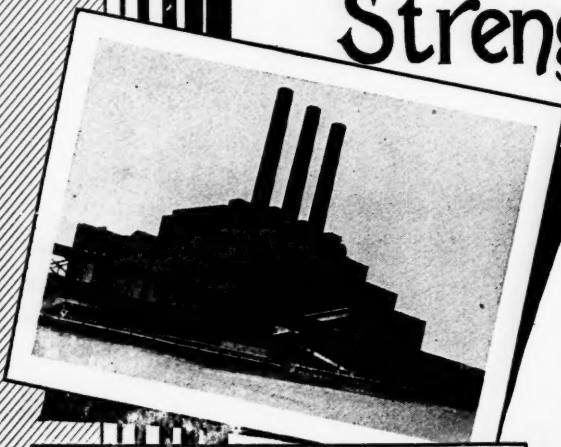
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Weekly }

BALTIMORE, JUNE 25, 1931

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The Railroad Alternative

FINDING themselves facing a dire emergency, the steam railroads of the country have asked for an immediate selective increase of 15 per cent in freight rates rather than to be forced to make a reduction in the wage scale of their employees. Under government regulation, as the railroads' application to the Interstate Commerce Commission states, the powers left to railway management to stave off the threatened serious impairment of their financial resources and their capacity to continue to offer efficient transportation service is limited. The railroads cannot increase rates without the approval of the Commission. They cannot reduce scales of wages without extended arbitration proceedings, although they may furlough employees and curtail expenditures, both of which have been done in recent months. As the last resort the railroads contend that their only alternative is to get more money for their services, as the emergency requires prompt action and prompt action cannot be secured through an effort to lower the wage scale.

In this objective of the railroads to rehabilitate their earning power, they are supported by leaders in the great life insurance companies which, in the aggregate, have invested more than \$3,000,000,000 in railroad securities. The savings banks and other investing interests of the country at this writing, while not officially backing the movement for higher rates, are deeply concerned, since they likewise hold an additional \$3,000,000,000 of railroad obligations.

As the MANUFACTURERS RECORD views the dilemma, inasmuch as the railroads are facing the prospect of not meeting their fixed charges, it is a case of getting more money for the work they do or reducing the wage scale of their employees. Without going into details of the railroads' petition which is a particularly clear statement of their case, it is pertinent to ask: What effect will the higher freight rate have on the business situation? Advocates of maintenance of the wage scale at all costs very likely will favor granting the higher rates. Because of the liquidation of wages that already has taken place elsewhere and because of the contention that some organized wage scales are

out of line with existing conditions, others in the business world view the effort to protect railroad workers at the expense of the general public as detrimental to business and harmful in the end to the railroads themselves.

It is pertinent to mention at this point that according to the National Industrial Conference Board, during the last quarter of 1930 both average hourly and average weekly earnings of the railroad employees of the United States were higher than for any previously recorded period during the past 17 years.

Loss of business and high wages are not the only troubles of the railroads. Other expenses are eating into their earning power. More than one-third of the railroad net earnings was paid in taxes to the various Federal, state and local governments in the first four months of 1931.

Motor truck transportation under existing rates has cut deeper and deeper into the railroad freight traffic. And it might be conceivable that under an increase the railroads would lose more business to other transportation mediums, and therefore be compelled to furlough more men. There are now about 400,000 fewer railroad employees than in 1929.

On the other hand, should a freight rate increase be granted, there is the possibility that general trade would be stimulated. Buyers of commodities affected—in order to take advantage of the lower prevailing rates before an increase took effect—might very well place orders for immediate delivery. This quickening of trade might be the spark that would set in motion a revival of business.

"Such an advance in rates as is proposed would enable the railroads to pass safely through the crisis," says the Railway Age. "The industry, commerce and people of the country would have to pay the higher rates. Every branch of industry and commerce and every class of people are suffering from the depression. Would it be better for the public for an advance in rates to be refused, and for many railroads to be allowed to continue to drift toward disaster, or for the

public to pay enough more in freight rates to tide the railways over? Profitless railroading is as bad for general business as profitless merchandising. An advance in freight rates that will stop profitless railroading is as essential to the revival of prosperity as an advance in commodity prices that will stop profitless merchandising."

A passenger fare cut last winter in the Southwest to attract transportation from bus lines failed to bring in sufficient additional revenue through increased volume of traffic to warrant continuance of the plan, and the railroad in question on July 1 goes back to its original rate of 3.6 cents a mile. Anticipated reduction in passenger fares by some railroad lines has been immediately met by a cut by bus transportation systems in order to hold the business. Under such a situation one wonders, since reductions for passenger transportation failed to hold the volume of passenger business for the railroads, what will be the effect on freight traffic of the railroads should an increase be granted? Would it throw the burden of the increase on those localities and those commodities that are entirely dependent on railroad transportation?

Have the railroads done everything possible to increase their efficiency in meeting other forms of transportation? Much has been done to improve railroad service, but some trains are now running on schedules slower than those of 30 years ago. The Atlanta Constitution recently called attention to the fact that a Southern road in 1900 had a passenger schedule of 15 hours between Atlanta and New York over a single track. Now, with heavy rails and double tracks, it takes seven hours longer to make the same trip. As to the freight end of the same general problem: By inaugurating a door-stop delivery system, the railroads could expedite their freight service and thus be in a better position to meet truck transportation.

The whole question is so involved, because of government regulations imposed upon the railroads, that we do not see how a quick decision can be made. Were the railroads an entirely private business, they could have handled their wage question as thousands of other concerns have been compelled to handle it in meeting the business recession.

On the same subject the Richmond News-Leader says:

"Doubtless the man in the street would be willing to pay a bit more for food and fuel next winter, to supply the 15 per cent increase in freight rates that the railroads ask, if he had assurance that this increase would help restore normal business. The price would not be excessive if the granting of temporarily-increased rates means a general return of confidence, a rising market and the re-employment of the idle. But will it? Is transportation history to repeat itself, and are the railroads once more to emerge from their distress, aided or unaided, as they did in the 90's and again after 1920, or has there come into the problem a new factor of wage-maladjustment, of bus competition and of world-distress, that will upset the probabilities? Nobody knows and nobody will know until the experiment has been made."

"Advertising will turn loose the enormous buying power of the American people."—Gilbert T. Hodges.

Refute Attacks With Facts

THE editorial, "The Public Utility in Southern Upbuilding," in the MANUFACTURERS RECORD of May 21, has been very widely commented upon and the facts it contains about how public utilities through their development work have benefited the South have been widely quoted. Among recent comments received is one from a power company operating over a large area, including several Southern states, calling attention to the fact that during the first three months of this year more than 51 plants were located along its lines. These plants represent an approximate investment of \$7,700,000, give opportunity for employment to nearly 3000 persons and will have an annual payroll of more than \$2,800,000. Twenty of these plants with a payroll of nearly \$1,000,000 were established during the month of March. Not only does this show the extent of the work of one power company for a short period, but it also indicates that even during the months of unsettled business conditions there are men who are carrying forward expansion programs.

This is another illustration of the development work of the public power utilities in building up industrial wealth and creating opportunity for employment of men and capital. Yet from the political attacks now being made against the utilities, and the efforts of some legislators to place burdensome taxes and restrictions on them, they are apparently regarded by some as a monster sapping the nation's wealth and energy.

On this point, W. Alton Jones, who is vice-president of Henry L. Doherty & Co. and president of the National Electric Light Association, at the annual meeting of the association in Atlantic City strongly urged that leaders in the power industry "aggressively follow up the matter of answering such attacks through public statements and paid advertisements, if necessary." "In my opinion," said Mr. Jones, "the management of light and power companies would be neglecting their obligation to their stockholders and the public if they failed to openly challenge unwarranted attacks. Certainly we are obligated, and our investors expect us, to defend their property against the muckraker who is a parasite in every democratic government."

"If evils exist, we should correct them from within. Taken as a whole, no industry in America has done more than ours to merit the confidence of the people."

Supplementing President Jones' declaration of policy, Paul S. Clapp, managing director of the association, advocated an aggressive campaign of public education to meet attacks of a political nature on the industry, for he believes the power companies have adhered to a course of silence which has been detrimental to the industry and to the best interests of the public. Such a policy of education has long been urged by the MANUFACTURERS RECORD. The public utilities must refute unwarranted attacks with facts.

Citing a specific case, the Dalton (Ga.), Citizen, in

a recent editorial, "A Little Plain Talk," makes this comment:

"The Georgia Power Company has done more for the up-building of industrial Georgia than any other force in the state. It has spent its money to bring new industries to the state. It is the largest taxpayer in the commonwealth, and it is furnishing power and light at rates that are reasonable, certainly not confiscatory, as the demagogues charge.

"Yet it is hounded by the legislature when it is in session, and all the time by commissions, municipalities and politicians. It must spend a good part of its time fighting in the courts to get justice and relief from ill-advised action, taken often in spite, and as a means of vengeance."

The Apple of Sodom

EFFORTS to evolve some practicable plan for unemployment prevention or relief attain doubly-deep importance through a movement for the dole as an alternative. A feeling is being fanned that the dole, disguised or open, is an obligation due to the man or woman unwillingly unemployed, and expansion of the practice even to some classes of willing idlers is not without appreciable support.

The right of every man to work has been recognized from earliest times, but always until very recent days with the proviso that he find the opportunity and position. Whether through advance in civilization or through sheer sentimentalism, this proviso now has been deleted and an obligation seems laid on the employing group to provide work for all workers, in some way or other, regardless of economic and industrial conditions. And, when employment is insufficient, many insist that the Government furnish funds for the unemployed.

Without any experience as a guide, America is striving to solve the problem. The evils inherent in a false solution are greater than those which impend if no practicable answer be devised. And supreme among the evils of an improper solution are those which inevitably follow adoption of the dole. Loss of individual self-respect, loss of family independence and pride, loss of mass morale, and national deterioration and degradation are unescapable consequences of the dole. The fruit of the dole is the Apple of Sodom, beautiful in appearance, but turning to ashes when tasted.

The insidious and corruptive effect of the dole penetrates even honest and legitimate efforts to ameliorate unemployment suffering. The dole in Great Britain originated from distortion of an unemployment insurance plan, although the spread of the plague was stimulated by the great world war. Unemployment insurance was started in England in 1912 and, through universal employment in war years, a reserve of \$70,000,000 was amassed. Post-war unemployment made fearful inroads and by 1921 the fund was exhausted, and Britain turned to the dole.

By 1923, the British treasury had advanced \$80,000,000, which by 1926 had increased to \$109,000,000 and by 1930 to \$189,000,000. For this year, the British treasury dole will total \$507,000,000, or 77 per

cent of \$657,000,000 to be disbursed in unemployment relief, the balance coming from assessments on employers and employees.

The percentage paid by the British treasury in the relief total is significant. This 77 per cent may be regarded as the dole, pure and simple. The balance is the proceeds of a legitimate fund fairly raised through cooperation between the capital and labor groups in industry. The cankerworm of the dole has eaten into unemployment insurance and now outweighs the legitimate insurance contributions by more than 3 to 1.

As Leroy A. Lincoln, vice-president of the Metropolitan Life Insurance Company, well says, preventive measures for the elimination of unemployment are preferable to measures designed to provide relief; but the day when such preventive measures will be available as a complete solution of the unemployment problem is not yet in sight. Until that day dawns, unemployment relief must be the major consideration.

"Actual experience has demonstrated that unemployment insurance, as insurance, falls far short of accomplishing what its most enthusiastic advocates claim for it," Mr. Lincoln comments. "On the other hand, it has not as yet been proven that it is an entirely impractical coverage."

Prevention of some volume of unemployment probably will be found impossible. Provision to tide the idle over till better days no doubt will be found practicable. Recourse to the dole, however, inevitably will defeat both aims.

War Debt Moratorium

PRESIDENT HOOVER'S suggestion of a year's moratorium suspending German and Allied war debts is before the world. England's acceptance is expected; France's attitude is not so far known, while Germany says "it is help from heaven."

Congress' approval is necessary, but as the next debt payments are not until December 15, if Congress acts promptly when it convenes it will be in time. As Congressional leaders are reported favoring the plan, it is regarded as probable Congress will approve.

The first reaction to the announcement is a rise in the stock market and a better feeling in business circles. It is expected part of the offer will be that the money held out for a year shall not be spent for armament. The burden of her armies weighs Europe down with taxation. With Secretary Mellon in conference with Europe's leaders and Senator Morrow having just returned from abroad, the President has had information from advisors whom he trusts.

It is a proposal of major importance and having come when clouds were darkest in the European sky, it may be the turning point toward confidence and up-building. The United States can well afford the delay if its assistance is not misused.

Cheering News

SPEAKING by and large, the industry or concern or area which holds its own in the present day is generally regarded as enjoying a fair volume of prosperity. Concrete evidence presented to the MANUFACTURERS RECORD indicates that the South is not only holding its own but that here and there it is advancing in appreciable measure.

In the field of finance, banks have reopened, the general foundation has been strengthened and the superstructure materially braced. Agriculture again proves profitable in many sections of the South, and so contributes to the stability of other industries. Business generally is reported as improving and real estate has rallied substantially.

Following an article in the MANUFACTURERS RECORD, May 21, showing the recovery and "stability of state banks" in the South, the Associated Press in a dispatch from Atlanta discloses that in five Southern States, since January 1, more than \$39,000,000 in deposits has been restored to circulation or made otherwise available for use. The aggregate capital of the reopened institutions was \$6,779,000, distributed among Arkansas, Mississippi, North Carolina, Kentucky and Florida. Reasonable interest rates on money for financing and moving crops are reported, and the banking profession has displayed cooperative interest in the farmers' undertakings.

In a monthly survey of Alabama business conditions, the Alabama Polytechnic Institute notes "excellent gains by several lines of industry in April as compared with March." Construction contracts had risen 5.8 per cent, cotton consumption 3.6 per cent, automobile sales 37.7 per cent, pig iron output 7.9 per cent and life insurance sales 9 per cent. The range of items in which improvement is noted is as significant as the percentage increases.

"Since for a majority of the list there is normally a seasonal decline in April," the survey describes these statistics as distinctly favorable and adds that Alabama made better relative gains for these items than did the country as a whole, in the period mentioned.

Similarly, from Georgia comes cheering news, with Texas, Virginia, Louisiana, Tennessee and Missouri also contributing specific illustrations.

"We are working overtime—until 9 and 10 o'clock at night—and cannot fill

the orders on our books," says Isaac May, president of the Rome (Ga.) Furniture Company. More than this, Mr. May feels assured of sufficient business to keep his plant running at full capacity through the remainder of the year.

The Unagusta Manufacturing Co., Hazelwood, N. C., adds to its force and operating time because of increased orders for high grade furniture for delivery in the next six months.

Also picked at random, the Kellogg Lumber Company, Monroe, La., may be cited as an indication of better conditions. Virtually idle from January 1, this plant has resumed large-scale operations and provided work for more than 200 men. Daily receipts of 30,000 feet of timber, in uncut logs, are expected, and the concern plans to carry about 4,000,000 feet of lumber on the yards, including 1,000,000 feet of flooring.

"Business conditions over northwest Texas and southwestern Oklahoma counties appear to be brighter, and merchants are expecting better trade for June and July," says a news dispatch in the Dallas Morning News.

"The railroad freight business can be considered a gauge of economic conditions," says J. L. Darragh, general agent of the Nashville, Chattanooga & St. Louis Railroad, "and our line has increased its freight business every month since last winter." Large-scale shippers in Chattanooga report increase in their respective lines of business, and Mr. Darragh discerns "reasons for optimism."

Symptomatic of the situation in real estate circles is an item in the High Point (N. C.) Enterprise:

"During the past 60 days, one real estate firm here has sold 21 houses. Auction sales of building sites on two days resulted in satisfactory volumes of business. Add these indices to the number of building operations under way in town, and one gets a better understanding of the revival of local interest in investment land."

For more than three years, the Enterprise comments, "those who have trafficked in real estate have had a precarious experience," and "the turn for the better, now pleasantly evident, is a business trend of distinct importance."

Several plants handling building materials in Atlanta and other parts of Georgia are reported as resuming op-

erations after a shut-down of several months, and one large industry in Columbus is cited in particular. A payroll is being revived which "is being felt in many lines of business," and Georgia manufacturers of building materials are profiting by construction activities.

More or less typical of all Texas is a report from Longview, announcing "a decided spurt" in building activity. Twenty-seven building permits were issued in one week, bringing the permit total for the year to \$904,748. Analysis of the 27 permits shows a preponderance of residence construction, followed by apartments. Building activity at Wichita Falls supplements the Longview showing. "Paint dealers report better business; work has been started on the new educational building of the First Methodist Church, which will represent an expenditure of \$125,000; work on the federal courthouse and postoffice building impends, to cost \$650,000, exclusive of the site."

Also of interest in the South is the fact that the movement of grain and other crops "is creating a better demand for labor."

Cheering news items on agriculture are introduced by a statement from the Department of Agriculture, with the following reference to Southern states:

"In Virginia, the brightest spot on the agricultural horizon is the break in the state's record drought. Virginia farmers this year will devote more time and acreage to the food and feed crops and less to the so-called cash crops."

"Agricultural prospects for West Virginia appear much brighter for the 1931 season. Fruit crops have come through the winter without any frost damage. Farmers intend to increase the total acreage of all crops by approximately 7 per cent."

"Preparations for 1931 crops in Tennessee are further advanced than in any recent year. Prospects are for a substantial increase in the acreage of practically all crops, especially sweet potatoes and Burley tobacco."

"Florida has harvested the largest citrus crop ever produced in the state. The present reaction seems to be an increased production of sweet potatoes for family consumption and of corn and peanuts and other feed crops for livestock."

"Missouri farmers are fast recovering from the drought of 1930. General optimism prevails."

Approximately 100,000 carloads of fruits and vegetables have been shipped

from Florida and marketed to date, not including great quantities of products sold in adjacent communities, says the Miami Herald. The citrus crop this year was nearly double that of last year, while the total fruit and vegetable production to date is 160 per cent over last year. "Millions of dollars have been brought into Florida by the splendid output," the Herald adds, while the Orlando Sunday Sentinel and Reporter-Star estimates that between \$15,000,000 and \$20,000,000 of such money passed through Orange county banks alone.

Twenty million dollars in work for the Norfolk Navy Yard presages prosperity for a large area "in terms of healthier employment conditions, uninterrupted work for a large body of well-paid, skilled artisans, and a steady circulation of millions of greenbacks through the channels of local trade," as the Norfolk Virginian-Pilot puts it. One vessel, the Mississippi, already is at the yard for modernization and the Idaho is scheduled for the near future.

The placing of a 1,500,000-pound order for copper to meet requirements of his concern in St. Louis leads James R. Kearney, Sr., to doubt that he "ever heard of depression." In 1930, says Mr. Kearney, the business of the James R. Kearney Electric Company increased 21 per cent over 1929, and, "I think we'll beat it this year—I've set my goal for a 50 per cent increase," Mr. Kearney asserts.

Better prospects are ahead is the view of Edward L. Ryerson, Jr., president of Joseph T. Ryerson & Son, Inc., iron, steel and machinery, with headquarters in Chicago and wide connections in the South. He reports his company is receiving some increased business because of depleted inventories and that there is a growing demand for immediate stock shipments from many industries.

Similar optimism is expressed from other quarters, but the foregoing statements cover some of the specific indications of better times for the South which have come to the MANUFACTURERS RECORD.

New Orleans Dock Board Reports Record Business

Business on the Inner Harbor Navigation Canal was better during May than at any previous time in its history, according to the Board of Commissioners of the Port of New Orleans. During the month, 1273 vessels, having a total tonnage of 476,224 used this facility, representing an increase of 461 vessels and 169,848 tons, as compared with May, 1930.

\$13,000,000 Building Program at San Antonio

By R. WM. ARCHER, Manager, San Antonio Builders Exchange

SEVEN major construction projects either completed or under construction, four yet to get under way, three groups of buildings being erected at Fort Sam Houston and a veritable "City of the Air" nearing completion at Randolph Field; these and other activities have brought an array of modern architecture and workmanship reared in majesty side by side with the ancient edifices of Spanish grandeur which make San Antonio the most picturesque city of the South.

The program represents a building outlay of over \$12,868,000. Of this amount, \$3,897,000 is being expended by private interests in San Antonio, while \$569,000 is going into modern Army quarters at Fort Sam Houston, and the rest into erection of the new "West Point of the Air" at Randolph Field. Contemplated work for San Antonio encompassing four major projects aggregates \$1,948,000.

The Government building program at Randolph Field has been the object of nation-wide interest. The field is located on a site of 2500 acres, all enclosed, and presents a picture of a modern city. Structures already erected here or under way represent an investment of \$7,023,000.

Representative outstanding items in the rest of the program may be outlined as follows; all firms being located in San Antonio unless otherwise noted:

Recently Completed

Dittmar Garage, approximate cost \$75,000, 100 car capacity; Richard Vander Straten & Herff & Jones, architects; E. W. Oeffinger, general contractor.

Scobey Dry Storage Plant, approximate cost \$250,000; Engineering Service Corp., architects and engineers, Houston; A. J. McKenzie Construction Company, general contractors.

F. & W. Grand Silver Store Building, approximate cost \$97,000; L. J. Johnson, architect, New York; Joseph Morgan & Sons, general contractors.

San Antonio Light Publishing Co. building, approximate cost \$209,000; Robert B. Kelly, architect; E. W. Oeffinger, general contractor.

Shrine of the Little Flower & Priests

Home, approximate cost \$366,000; C. L. Monnot, architect, Oklahoma City; Dennehy Construction Company, general contractors, Oklahoma City.

Southwestern Bell Telephone Co. building, approximate cost \$1,400,000; I. R. Timlin, architect, St. Louis, Mo.; A. J. McKenzie Construction Co., general contractors.

Nix Professional Building, approximate cost \$1,500,000; Henry T. Phelps, architect; J. P. Haynes, general contractor.

Contemplated

Vocational Training School, estimated cost, \$98,000 for construction work, \$50,000 for equipment; Harvey P. Smith, architect, and Phelps & Dewees, school architects.

South Side High School Building, estimated cost \$750,000; Phelps & Dewees, school architects; associates not yet selected.

Bexar County Boys Training School, estimated cost \$50,000; Harvey P. Smith, architect.

San Antonio Postoffice, appropriation for building \$1,000,000; \$400,000 for site. Bids opened for site, now assigned to agents for examination.

Under Construction

Twenty-one Sets Company Officers Quarters, government plans; contract price \$249,438; Robert E. McKee, general contractor, El Paso.

Fifteen Sets Company Officers Quarters and three Field Officers Quarters, government plans; contract price \$230,036; Robert E. McKee, general contractor.

Twelve Non-Commissioned Officers Quarters, government plans; contract price \$89,880; Robert E. McKee, general contractor.

\$500,000 Miami Theater

Miami, Fla.—Details are being arranged by the Paramount Enterprises, Inc., of this city, subsidiary of the Paramount-Publix Theatres Corp., New York, for a \$500,000 theater here to seat 1250 to 1800. C. W. & Geo. L. Rapp, New York, are the architects.

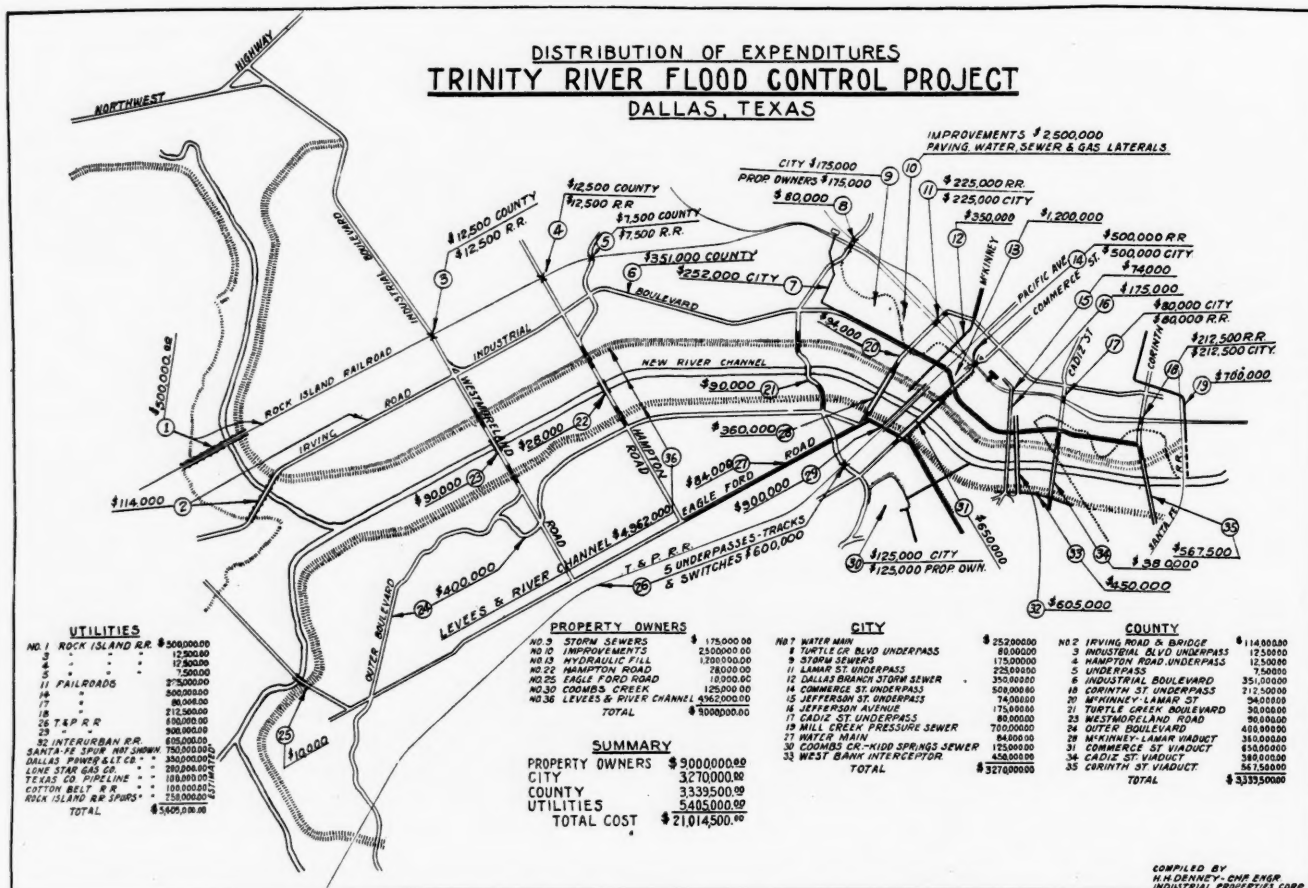
Flood Control *and* Reclamation in Dallas County and City

WITH completion in the near future of reclamation work in the area designated as the City and County of Dallas Levee Improvement District, the Oak Cliff section and that part of the city of Dallas east of the Trinity River will be joined together into Greater Dallas, and 10,000 acres of land will be made available for commercial and residential development. The city had employed the late George E. Kessler to formulate a program of development in 1910, and in a general way it is the Kessler plan that is being carried out. The entire treatment of a large area adjacent to the business district, the plan-

ning of the area to take advantage of traffic ways, railroad transportation and other modern facilities extended to serve these lands, is being handled by engineers experienced in industrial development. By the fall of 1931, the program initiated in the summer of 1928 should be complete, in so far as expenditures of the levee district are concerned. However, associated improvements financed by city, county and public interests in and around the area will continue for five or six years longer.

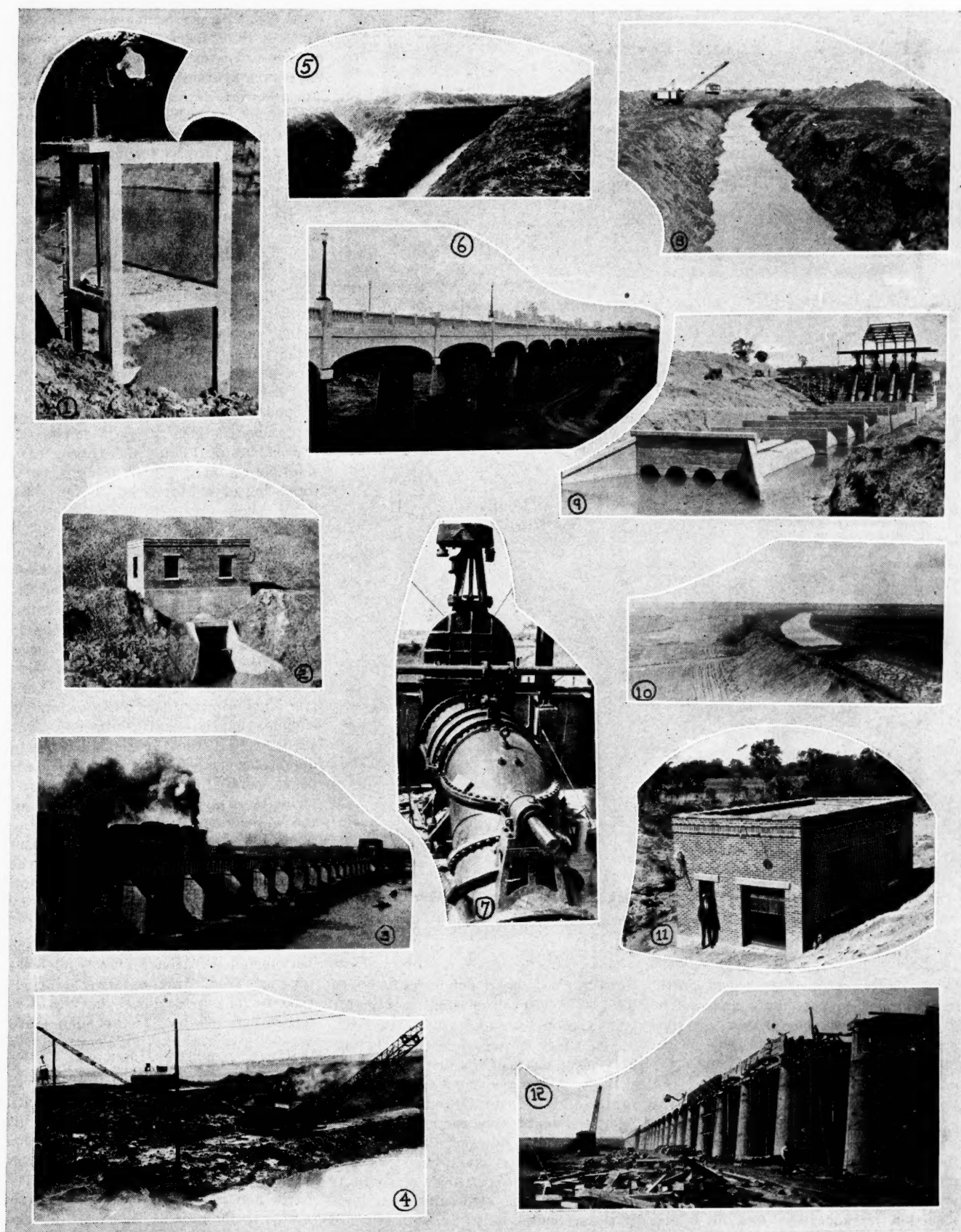
Dallas County Levee Improvement District No. Five was organized some 12 years ago and a levee of sufficient

height to protect the land from secondary floods was constructed from proceeds of a \$250,000 bond issue. This land was cleared of timber growth and placed in cultivation, producing mainly cotton and alfalfa. Two attempts to organize a district for the larger area failed before the present organization was formed in April, 1926. John J. Simmons, L. A. Stemmons and W. J. Wyatt were appointed as supervisors by the Dallas County Commissioners Court. Myers, Noyes and Forrest were selected as district engineers and the Morgan Engineering Co., Memphis, was appointed designing and consulting engineer. Dallas

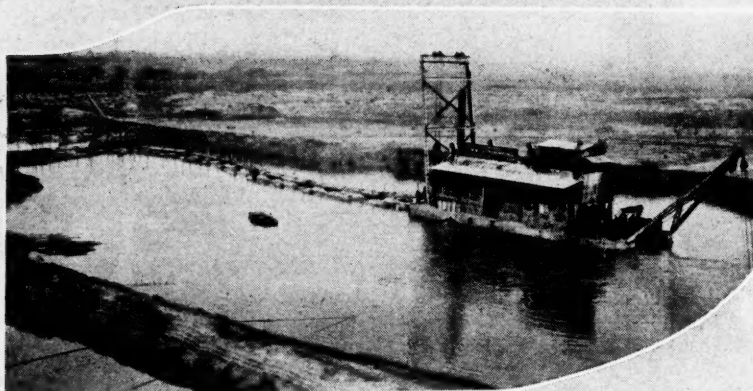
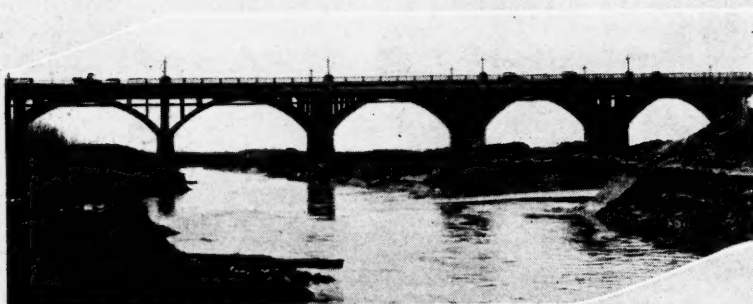
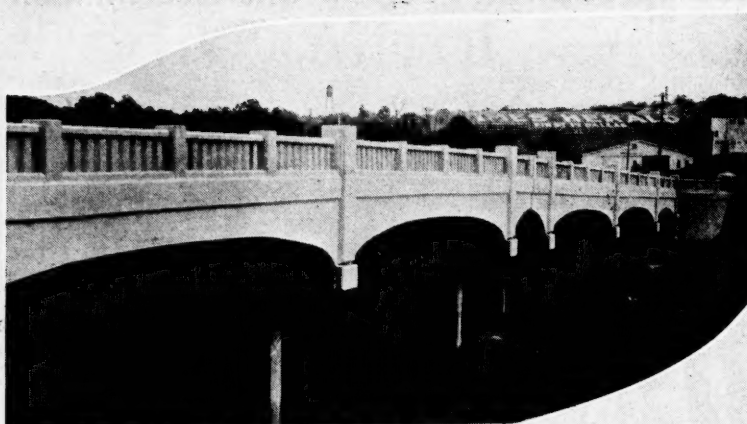


Sketch Map of the Levee District Indicating the Location and Extent of the Various Classes of Work, Also a Tabulation of Costs as Assumed by the Different Agencies

Phases in Progress of Levee Improvement Program and Reclamation



1 Gate Valve at Elm Fork Sluiceway. 2 Pumping Plant "D," Using Automatic Control. 3 New Texas & Pacific Railroad Bridge Over Floodway. 4 Draglines No. 5 and No. 8 on East Levee at Commerce Street. 5 Old Channel and the New. 6 Cadiz Street Viaduct, With the Dallas Skyline Barely Showing in the Distant Background. 7 Pump in Plant "B." 8 Main Diversion Channel in Section 2. 9 Pumping Plant "B" Has Four Complete Electrically Operated Units. 10 Showing Method of Constructing the New Channel. 11 Two 18-Inch Centrifugal Pumps Are Installed in Plant "D." 12 Building the McKinney-Lamar Street Bridge



Top—The Cadiz Street Viaduct. Center—Oak Cliff Viaduct of Diversion Channel.
Bottom—Hydraulic Dredge in Operation at Lamar Viaduct

Levee Improvement District had previously agreed to contribute any usable part of its constructed levees, and the proceeds of a \$500,000 bond issue, in return for completed protection from maximum flood. This together with the proceeds of a \$6,000,000 bond issue voted by the City and County of Dallas Levee Improvement District, provided funds for the construction work. The city supplied \$3,270,000 for the revision of streets, sanitary and storm sewers, construction of underpass and other improvements in and around the levee system. Dallas County issued \$3,339,500 of bonds, the funds being used in construction of concrete and steel viaducts, road grading and paving within the district. In addition it is estimated that expendi-

tures by the several public utilities will total \$5,405,000 for revising trackage for transmission lines and other structures, all of which is occasioned by the improvement work of the district.

Early in 1928 contracts were awarded to the Trinityfarm Construction Company, Dallas, for construction of 25 miles of levees and 15 miles of diversion channels, involving the handling of 18,000,000 cubic yards of earth, together with 12 concrete drainage structures, four large pumping plants, filling 12,000 linear feet of abandoned river channel, grading streets in an area adjacent to the business section and construction of a system of storm sewers to serve this area, 14 contracts in all, involving \$4,363,000. The contracts were divided into two

groups, one to seven included all levees, channels, muck ditch excavation, fill removal, clearing and grubbing; these were about 94 per cent complete as of April 1. Contracts eight to 14 cover concrete structures, sluice gates, pumping plants, hydraulic fills, street grading, storm sewers, levee sodding and maintenance. The entire program is about 85 per cent complete.

To provide an outlet for water which falls on the reclaimed area, 12 sluiceways have been constructed through the district's levees. At four locations, where storage capacity on the reclaimed side is not sufficient during times of high water in the floodway, pumping plants have been constructed. Pumping Plant "A," (lower east side), has two 18-inch submerged, double-suction centrifugal pumps driven by 80-horsepower, three-phase synchronous motors. Each unit has a tested capacity of 10,000 g. p. m. under a static head of 17 feet and approximately 5000 g. p. m. under 35 feet of head. Plant "B," (upper east side), is equipped with four units, each consisting of a 54-inch horizontal wood screw pump powered by a 350-horsepower synchronous motor and capable of handling 50,000 g. p. m. under a static head of 15 feet. Plant "C," (lower west side), has two units, consisting of 24-inch submerged, double-suction centrifugal pumps driven by 125-horsepower, three-phase, 60-cycle synchronous motors. Pumping Plant "D," (upper west side), is a duplicate of Plant "A." Electric current used at these plants is supplied by the local power and light company. At the three smaller plants automatic control is used, this feature being operated by a system of "Mercold" switches so arranged that variation of the water surfaces, in pump and chambers and discharge bays, opens and closes the gates and starts and stops the motors without the aid of an attendant. The plants may be operated also by manual control.

Construction equipment used on the job includes earth-moving equipment ranging from tractor-drawn crawler-type wagons to draglines having boom lengths of 150 feet and six-cubic-yard bucket capacities, and an electric driven hydraulic dredge. During the past 2½ years 15 draglines, three power shovels, six elevating grader and wagon outfits, two pile drivers and the hydraulic dredge have been used in construction operations of the district under supervision of the district's engineers. The earth moving machinery owned and operated by the general contractor includes seven Monighan machines, manufactured by the Monighan Manufacturing Corp., Chicago, having bucket capacities of three, four and six cubic yards, equipped with Fairbanks-Morse engines of 120, 180 and 240 horsepower, and having

boom lengths of 100, 125, 110, 140 and 150 feet. The dredge, manufactured by Morris Machine Works, Baldwinsville, N. Y., is equipped with a 16-inch pump and General Electric motors, main motor being 800 horsepower and auxiliary motors 400 horsepower. All machines are equipped with electric swing motors and generators manufactured by the General Electric Co. The three 3-T type machines have 30-horsepower swing motors and 25-kilowatt generators; four 4-W machines have 40-horsepower swing motors and 40-kw. generators, and the two 6-W machines have 65-horsepower swing motors and 75-kw. generators. Auxiliary lighting plants on the 3-Ts and 4-Ws are 2.2 kw. G. E. generators, and the 6-Ws auxiliary lighting plants are 2-3½-kw. Fairbanks-Morse generators. Each machine is equipped with a Willard storage battery, Type P. W. S. 13. The general contractor maintains a repair shop at a central point on the work.

Reclaimed area of the district covers over 10,000 acres. Fifteen hundred acres is immediately adjacent to the business section and is being developed as industrial property, served by main trafficways of the city and five railways. Property owners have organized the Industrial Properties Corporation for development of the land. The whole of the area is being brought to grade by filling with hydraulic dredge; streets and railroad trackage right-of-way are being improved and sewers installed. Streets will be paved. The platting of the property has been supervised by engineers familiar with the layout of industrial properties to secure maximum benefit from the standpoint of traffic problems, whether transportation be by air, highway, rail or water.

Power Line Extensions

Chattanooga, Tenn.—The Tennessee Electric Power Co. plans to construct 53 extensions to its power lines to accommodate rural patrons, according to an announcement here, and work is expected to be started immediately. Proposed extensions will affect the communities of Cleveland, Concord, Ball Camp, Daisy, Rockford, Jamestown, Mt. Pleasant, Jacksboro and Helenwood.

\$604,000 Conservatory Contract

Washington, D. C.—General contract has been awarded through the office of David Lynn, Architect of the Capitol, to the George A. Fuller Co., Washington, at \$604,000, to erect a conservatory building in the new Botanic Garden to be developed at the foot of Capitol Hill. Bennett, Parsons & Frost, Chicago, are the consulting architects.

\$2,975,000 Postoffice for Atlanta

Drawings have been completed for a new post office building to be erected in Atlanta, Ga., at a cost of \$2,975,000, including the site. The proposed building will be equivalent to 9 stories, having 6 floors above ground, several to be double stories in height. It will occupy the center of the northern half of a block bounded by Mitchell, Spring, Hunter and South Forsyth streets, setting back approximately 50 feet from all street lines and 30 to 40 feet from the south property lines. Above the first floor it will be about 150 by 300 feet, of steel and reinforced concrete. Base and exterior up to the first floor line will be of granite, while the remainder will be of stone and terra cotta or terra cotta with a Spanish tile roof. Terraces will be paved with granite slabs or stone and orna-

mented by granite balustrades, with similar construction on the set-back roofs.

Interior finish will be of marble in the main lobbies and stairs, with terrazzo floors and wainscots in the office corridors. Three highspeed passenger elevators and two large freight elevators with an automatic lift will be installed. The design of mechanical apparatus, such as conveyors and furniture layouts and equipment for handling mail, is being handled by the division of engineering and research of the Post Office Department at Washington. Contracts for a tunnel and foundation will probably first be awarded. A. Ten Eyck Brown is architect; Alfredo Barili, Jr., associated architect, and J. Wharton Humphreys, associate; Robert G. Lose, structural engineer, and Robert S. Newcomb, mechanical engineer, all of Atlanta.



Architect's Drawing of the New Building

Cotton Bagging for Cotton Bales

Notice that his mills will allow seven pounds extra weight to be added to all bales of cotton bought by them, if put up in 100 per cent cotton bagging, has been issued by Cason J. Callaway, LaGrange, Ga., president of the American Cotton Manufacturers Association. Also, he asks all the cotton mills in the South to cooperate with the growers by adopting the same practice.

Allowance of nine pounds extra per bale, if covered with standard cotton bagging, was announced earlier by S. Odenheimer, president of the Lane Cotton Mills, New Orleans, as reported in the MANUFACTURERS RECORD, June 4.

Mr. Odenheimer notified the Association for the Increased Use of Cotton, Columbia, S. C., to this effect.

Banana Ripening By Gas

The American Gas Association reports increased interest in the application of gas to banana ripening. It is hoped to devise a small low-priced warm-air furnace that will adequately meet the needs of banana rooms of which there are about 8000 in various parts of the country. A movement is under way to improve the construction of these banana rooms, equip them with fans and provide insulation and install an improved type of gas heater and humidifier.

A Noteworthy Suspension Bridge

By
FRANK W. SKINNER
Consulting Engineer,
New York

SUSPENSION bridges, though comparatively few in number, provide a means of thoroughfare usually not otherwise possible of accomplishment in a practical manner. The completion therefore of such an outstanding example of this tension engineering as the Hudson River span, the first above ground connection between the Island of Manhattan and the State of New Jersey, is of particular interest to municipalities generally, to industry and commerce. To residents of the South, also, where there are only a few bridges of the suspension type, the facts about a structure of such magnitude should be of especial interest.

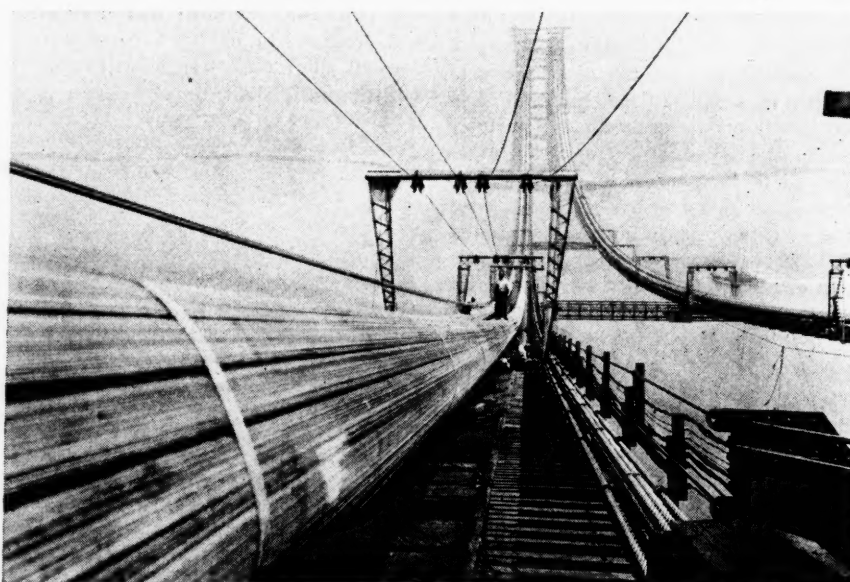
The long length span is the feature of the suspension bridge. Short spans may be of concrete, steel, or wood, but very long spans are necessarily of the arch, cantilever, or suspension type. The longest examples of these types are the 1675-foot arch highway span at New York across the Kill Van Kull, the 1800-foot railroad and highway cantilever span across the St. Lawrence River near Quebec, and the 3500-foot highway span of the Hudson River Bridge between New Jersey and New York City. A notable cantilever in the South is the 1050-foot span forming part of the Cooper River structure at Charleston, S. C.

Until commencement of construction on the Hudson River Bridge less than five years ago, there had been no notable improvements in the materials, design, construction or span length embodied in the suspension bridge since completion in 1883 of the famous Brooklyn Bridge with its span of 1595½ feet, for a long time the greatest in the world. New methods that were developed in con-

struction of the Hudson River span, however, have revolutionized important features of suspension bridge engineer-

doubtless be of great and immediate value for a vast amount of highway bridge construction.

Although the first twisted ropes made from iron wire produced by John A. Roebling, the "Father of American Suspension Bridges," were not suitable for long span cables, the cables he subsequently began to fabricate from parallel straight iron wires were of the type with which he built the longest and most



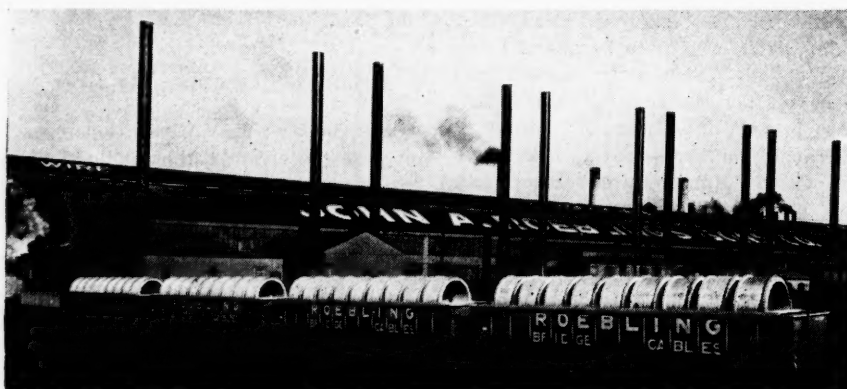
Strands of the Four Great Cables Completed and Partly Compacted

Note the substantial working platform underneath, itself a wonderful suspension bridge, and the overhead ropes that carry the wire spinning wheels

ing and have opened for it a new era. These improvements are applicable to all kinds of suspension bridges, and will

important suspension spans in the world, including the famous Niagara railroad bridge, the first of its kind, and his life's masterpiece, the Brooklyn Bridge, completed at the cost of his life. The Roebling organization expended hundreds of thousands of dollars in prolonged investigation, researches and experiments with huge scale models, and in the design and perfection of new machinery, including the development of new and improved methods of spinning the enormous cables high in the air for the Hudson River structure.

The cables, which form the backbone of the new bridge, required 28,400 tons of cold-drawn, acid open hearth carbon steel wire of the same type as that used first for the Brooklyn Bridge. The 106,000 miles of cable wire, or more than four times enough to reach around the



Shipping 275 Tons or 5,500,000 Feet of Cable Wire From Shops to Bridge Site

equatorial circumference of the world, is strong enough for a theoretical maximum span of about ten miles and weighs more than all the cable wire in the seven next longest spans of the world, all of them in the United States. Each 36 inches in diameter and nearly one mile long, the four great cables are suspended from the tops of two steel towers 3500 feet apart and about 635 feet high. At one end, their maximum stress of about 260,000 pounds is resisted by an enormous concrete anchorage weighing about 700,000 pounds, and at the other end they are concreted solidly into long inclined tunnels that transmit their load to the solid rock at a depth of nearly 250 feet below the tops of the Palisades cliff.

Wire for the cables was shipped to the site on special 150,000-foot reels, requiring altogether the equivalent of a train three and a half miles long for their transportation. Loops of this wire engaged spinning wheels that were rapidly hauled back and forth across the river, the wire of one reel being spliced to that of another reel until the first and last ends of a 434-mile long set of loops were spliced together. The endless skein thus formed was consolidated into a 4½-inch strand reaching from anchorage to anchorage. Sixty-one of these strands were compacted together to form each of the cables, all of them, as well as their individual wires, being adjusted to



The 3500-Foot Center Span and the Two 650-Foot Side Spans Completed Ready for Concrete Pavement

exact stress, length and curve. Eight spinning wheels were employed. Six of these were generally operating simul-

taneously and spinning the cable wire at the unprecedented rate of nearly 100 miles an hour. The work was completed in 208 working days.

From each cable there are suspended very large twisted steel ropes, some more than 600 feet long, having a strength of nearly 800,000 pounds each. Eight of these suspender ropes support each end of the huge girders 10 feet deep and 118 feet long and weighing up to 70 tons, which sustain the steel beams and concrete pavements forming the rigid 118-foot platform for the roadway and sidewalks 250 feet above the surface of the river.

To overcome the irregular stretching of the suspender ropes, which heretofore have always so acted under the first severe strain, the contractors subjected 3600-foot lengths of the ropes, 2-15/16 inches in diameter, to a preliminary stress of 200,000 pounds maintained for several hours, after which the ropes elongated with precise uniformity so that they could be cut to the exact required lengths. This improvement is of great importance in that it enables suspension bridge cables to be made far more rapidly, safely and economically, of large twisted ropes of any required length, instead of the slowly spun, endless straight wires. Already several bridges of about 1000-foot span have been built with twisted rope strands for their cables.

Efficacy of Agricultural Tariff in France

Summing up conclusions formed while serving as a member of the Federal Farm Board and while attending the World Conference of Wheat Exporting Nations held in London recently, Samuel R. McKelvie, in a statement issued before his retirement from the Board, said:

"I am convinced that the American farmer can place little dependence on the hope of help from other countries. We need not entirely abandon the export market for wheat but we certainly can make no money in offering the quantities and qualities we have been offering in export markets.

"In normal times we should be able to export 75,000,000 to 100,000,000 bushels of high quality wheat, mostly of the hard varieties, but under present circumstances even this cannot be done at a profit to the grower.

"I cannot conclude without leaving this thought to the American farmer: If you doubt the efficacy of a tariff on agricultural products, consider two countries, Great Britain and France. There

is no better husbandman than the Scottish farmer. He is industrious, thrifty and capable. The same may be said of many English farmers, but baronial estates have not encouraged the development of agriculture in England as in Scotland. No surpluses are produced in these countries but free trade has left the farmers to compete with the world. A moderate tariff would have made them secure and in turn would have added greatly to the stability of the British Isles without imposing any hardship on the consuming classes and with no offense to exporting nations. As it is, those farmers are at their wits' end.

"In France the reverse is true. The French farmer has prospered since the war. The government protects its agriculture. Tariffs have been substantially increased since the war. Unsettled conditions in the industrial regions are offset by the stability of agriculture. This is not to say that world depression is not being felt by the French farmer too. Population in France is about equally divided between agriculture and all other classes. This may have something to do with the friendly attitude of the government toward the farmer, but I believe the reason lies deeper than that: It is regarded as good business policy. That was the interpretation put on it by Mr. Tardieu, the French Minister of Agriculture."

TENNESSEE HOSIERY MILL SOLD

Massachusetts Firm Plans to Double Capacity of Tennessee Enterprise

Columbia, Tenn.—The Massachusetts Knitting Mills, Boston, J. S. Gordon, president, have purchased at auction the new plant here of the Cadet Hosiery Co., erected and equipped, it is said, at a cost of approximately \$350,000. The new owners plan to put the mill in operation immediately after the ratification of the sale and, in the employment of operatives, to give preference as far as possible to former employees. It is understood that two carloads of machinery are now awaiting shipment to Columbia, to augment the present complement of machinery and to double the capacity of the mill, bringing its roster of operatives to 400. The plant will manufacture "MKM" full fashioned hosiery, using the same trade mark as the Boston plant of the Massachusetts company. The main building of the local plant is 343.8 by 107.8 feet, equipped with 55 full fashioned hosiery knitting machines.

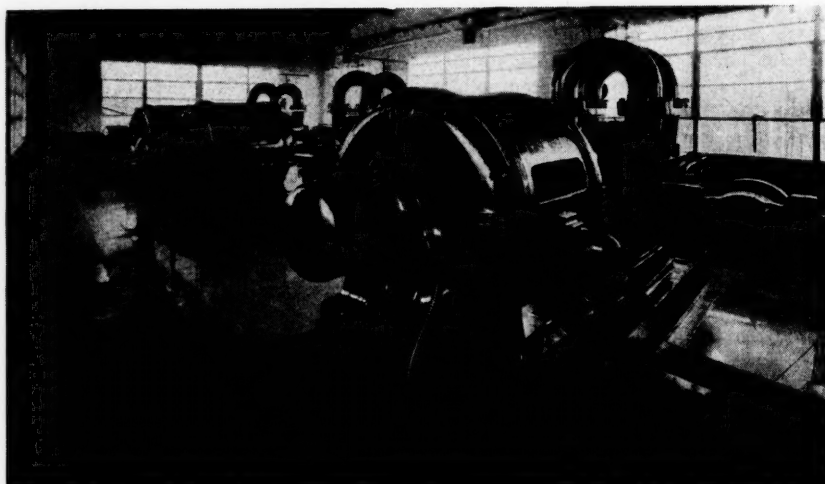
Electrically-Operated Pumping Stations

Boost Capacity of Pipe Lines in Oklahoma.

TYPICAL of modern automatic pumping stations recently developed by electrical and pipe line engineers is one just completed by the Texas-Empire Pipe Line Company about two miles north of Sand Springs, Okla. Installation of automatic remote control equipment makes possible the operation of the station from the company's Tulsa offices in the Philtower building. In case of trouble at any time, protective devices automatically shut down the station; signals indicate the point of trouble and show exactly what is needed to put the equipment back in service.

In the pump room of the station are three multiple-stage 1800 r. p. m. centrifugal pumps designed to deliver 3035 barrels of oil hourly against 750 pounds pressure when two units are operated in series. Each pump is directly connected with a flexible coupling to one 800-horsepower, 2200 volts, 162 ampere, three phase, 60 cycle synchronous motor. Two units are used for normal operation, the third serves as a standby.

A three-panel control board on the wall in the office carries the electric meters; the switches and indicating instruments such as ammeters and voltmeters for each motor are mounted in line up and down the board. There is also an etched plate of the station layout with a red light representing each motor and the motor-driven gate valve, the sump pump and each of the main line pumps. These lights burn when the corresponding units are in operation. Lights are provided also for the ammeters and exciters. With the indi-



Interior View Showing Motor-Driven Centrifugal Pumps

cator lights burning, the operator has a picture of what is in operation at the station.

Flow of oil through the station is measured by an electrically operated flow meter on the discharge line outside the station. The recorder for this meter is placed on the gauge board in the pump room.

The Texas-Empire system includes a 10-inch pipe line from Seminole to Cushing, Okla., and a 12-inch line from Cushing to East Chicago, Ind., with branch lines to Lawrenceville and Lockport, Ill. The 11 original stations, placed about 80 miles apart, were equipped with reciprocating pumping units. In one of these stations which was acquired through purchase, local conditions rendered un-

satisfactory the reciprocating pumps and these were replaced with electric-motor driven centrifugal equipment in January, 1930.

In the summer of 1930 a construction program was begun, to increase the capacity of the system from 50,000 barrels to 70,000 barrels daily. To that end, additional pumping stations were located midway between the original stations on the 12-inch line north of Cushing, and also nine of the original stations were increased in pumping capacity. Of the eight additional stations, seven are electric-powered and six are equipped with centrifugal pumps of the type used at Sand Springs.

The booster stations are of brick and tile construction and equipped with mod-



Sand Springs Station of the Texas-Empire Pipe Line Company

ern lighting and heating systems. Ample window space is provided. The equipment in each station has been so placed as readily to facilitate repairs.

Promote Peanut Industry

Marked interest in the South is reported in a movement by the Tom Huston Peanut Company, Columbus, Ga., to

promote every phase of the peanut industry, in which production in 1930 ran to 1,183,000,000 pounds, valued at \$38,276,000. Seventy-five different kinds of peanut seed were sent to every experiment station in the 12 peanut states, without charge, and the fruits of these seeds will be studied by many prominent plant pathologists, agronomists, horticulturists, botanists and plant breeders.

Mill to Increase Force

Lynchburg, Va.—The operating force of the Virginia Textile Corporation here, subsidiary of the Dundee Textile Co., Passaic, N. J., will be increased to 200 as soon as qualified hands are found, according to an announcement by the company. The plant has been operating since 1927 with a small force.

Growth of Electric Power Industry

IN spite of the general business depression, the electric light and power industry in 1930 spent more on new construction than in any previous year. Expenditures were made according to previously formulated plans and totalled \$919,418,000, as compared with \$853,000,000 during 1929. These figures are from the forthcoming Bulletin of the Statistical Research Department of the National Electric Light Association, reviewing the work of the past year.

The electric industry's budget for 1931 contemplates a total expenditure of \$702,000,000. The decrease is caused to some extent by the price decline of materials and reduced construction costs. Actual physical volume of new work more nearly approximates the general average of previous years than the figures would seem to indicate.

Of the total 1931 budget, 23½ per cent is allotted to generating facilities, 31½ per cent to transmission lines and substations, 33 per cent to distribution, and the balance, 12 per cent, to miscellaneous items. Of the proposed total of \$164,000,000 for power plant construction, 66 per cent is to be applied to steam stations and 34 per cent to hydro-electric plants.

More than the usual mileage of transmission lines was placed in service last year. A total of 15,240 circuit miles of lines at 11,000 volts or more were constructed, bringing the total in service on December 31, 1930, to 200,171 miles. The 1929 line construction totalled 11,134 circuit miles, and the mileage for 1928 was 8665.

Total increase in generating capacity last year amounted to 2,491,000 kilowatts. This represents an average expenditure of \$369 per kilowatt increase in capacity as compared with \$365 in 1929 and \$387.50 in 1928.

The large expenditure going into dis-

tribution shows that the electric light and power companies are engaged in extensive programs in building up and extending distribution facilities to take care of existing increased demands, to provide for the much heavier demands anticipated and to improve the standards of service, says the Bulletin.

The heavy capital expenditures required to distribute electricity necessitate long-range planning of five to ten years and systematic construction programs. Growth of the domestic load, indicating as it does, uses per customer ten years hence of 1000 to 2000 kilowatt-hours per annum, explains to a considerable extent these heavy expenditures now going into the distribution plant.

Referring to the growth of the electric public utilities in the United States as an outstanding record of adventure, development and achievement, Gerard Swope, president of the General Electric Company, at the recent National Electric Light Association convention in Atlantic City, pointed out that in the early pioneering days local competing plants were unrestrained in their policies and relations to the public. Today, the industry operates under exclusive franchises, supervised by a public service commission. Policies are determined by a broader conception of public relations. Securities are widely distributed and often held largely by the public they serve. Service is extended to the less thickly settled parts so that a larger number, over a wider area, may enjoy the benefits of electricity, with a wider range of service and increasing reliability and dependability under all conditions. Rates are constantly being lowered, often initiated by the companies themselves.

"In the last few years, particularly," said Mr. Swope, "more appliances have been placed in the home and they have

tended to make the home more comfortable, more healthful and more convenient. In the factories, more power has been placed in the control of the workingmen, causing production to depend more and more upon their directing intelligence and less and less on brute strength, tending to reduce the hazards in the shops and making it possible to introduce better methods and lower costs of manufacture, one of the largest contributing factors to the higher rates of pay and thus higher standards of living in this country than abroad.

"Individual initiative and enterprise have made this rapid progress possible and have resulted in placing the United States far in advance of any other country in the use of electricity in the home and in the factory. With such rapid development, both in time and in extent, undoubtedly some mistakes have been made, but progress of this character must be paid for and, on the whole, when a balance is struck, there does not seem to be any question that this rate and extent of progress could not have been made in this country under any other system.

"This industry, even in a year of decreased use and severe curtailment, measured generally by decreases of 25 per cent to 50 per cent in other lines, for the first five months of 1931 has shown a decrease of only four per cent as compared with the same period last year, two per cent as compared with the same period in 1929, and an increase of 10 per cent over 1928. I, therefore, am glad to quote the words of President Sloan of the National Electric Light Association:

"There is no industry in the country which is more stable than the industry which furnishes electric light and power and there is no industry which can look forward to its future with greater equanimity."

Individual Business Planning Needed

Movements for the advance planning of business for the nation as a whole or by trade and industrial lines, and the effort of federal and state governments to plan public works well ahead, are not primary remedies for depression but distinctly secondary to the aggregate influence of advance planning of each individual private business, says the current Weekly Bulletin of Ernst & Ernst, accountants.

The psychology of depression, it is pointed out, develops a tendency among business men to look far afield for help from the outside, when a remedy or at least relief may lie at the elbow within the company itself. "Just at this time the important point is not that business is slow, nor that the causes were whatever they were, but that a remarkably large amount of business exists, and that it is the job of each officer of each company to go after it and get it. In times of stress, when cooperation and joint action is most needed, business units are least inclined to pull together on any joint program, as is demonstrated by the current difficulties of trade associations in maintaining their organization and work. Another trouble is that so many business men are encouraged by the idea of group action to rely too much on the group, or conditions-at-large, and this is often to the detriment of their reliance on the internal plans and initiative of their own particular companies. Group cooperative action is good only so long as it does not encroach upon or become a substitute for individual action." Further:

"A deep and wide readjustment of business lines has been going on for the past two years, and it is fairly obvious that this will continue for some time in the future; there is never a decisive end to the processes of adjustment. Each company, each business unit ought now to be realizing this pointedly and doing its utmost to adjust its own affairs for survival. This is not the doctrine of pessimism; it is the doctrine of work.

"Every company has a certain amount of business on hand and in prospect, for otherwise it would not be in existence. And every company has an advance plan of some sort, although it may exist too much in the mind or minds of the executives. Let them put down their facts on paper, and the vague intangible plan becomes a definite workable plan. How much goods will be sold within the next few months, within the next year? Put it down, right or wrong, and the act of putting it down will in itself be helpful. How are they to be produced or handled? Examine this, scan the details, and the act is worth while for itself. Do the finances fit the plan thus far recorded? If not, make them fit, or else fit the plan to the finances. Are the internal affairs of the management in

proper adjustment to carry out the plan? Close application to the question, with all its collateral questions, will yield suggestions for improvement."

In conclusion Ernst & Ernst makes this significant observation:

"'Business leadership' is a term on all lips these days. The essence of business leadership is advance planning. The cure for depression does not lie primarily with national and international leaders, or merely with big business men, but with each business man, no matter what his product or position."

\$400,000 Baton Rouge Hotel

Baton Rouge, La.—Work on a new \$400,000 hotel at Lafayette and Convention streets in this city, to be known as Hotel King, will be started at once, with a view to completing it by the first of next year. It will be erected by the Interstate Hotel Co., Shreveport, La., and will be operated by Roy L. Heidelberg, manager of the Heidelberg Hotel here, and Joe C. King. Edward F. Neild is the architect and the Ashton Glassell Co., general contractor, both of Shreveport. Other contracts have been awarded as follows:

Plumbing and heating—Standard Plumbing, Heating & Supply Co., Baton Rouge
 Tile—General Tiles, Inc., Baton Rouge
 Electrical work—Moorman Electrical Co., Shreveport
 Millwork—Baton Rouge Sash & Door Works, Inc.

\$3,000,000 Building Program at Longview, Texas

Longview, Tex.—Recent developments in East Texas indicate new oil producing areas southwest of Longview, which will place this city, already the center of one of the greatest oil fields in the United States, in a still more favorable position. Besides its own field here, Longview has four other fields within a radius of 70 to 90 miles, while a development at Shelbyville in Shelby County promises to bring another producing field into the group. The Van field about 70 miles west is said to contain 4000 proven acres and 500 producing wells, while the Boggy Creek field is about 75 miles to the southwest; the Louisiana fields 75 to 80 miles to the east, and the Texarkana field about 90 miles to the north. Over \$3,000,000 is being expended here and in the vicinity for building and industrial projects as the result of the oil field developments.

Memphis Plan for Speeding Up Building Succeeds

Memphis, Tenn.—So satisfactory have been results of a campaign sponsored here by the Memphis Chamber of Commerce and the Memphis Building Congress for stimulating building activities, that a permanent organization will be formed to carry on the work recently inaugurated by a committee. Plans have been outlined for such an organization by the executive council of the building activities committee after hearing reports proving the success of the movement to "Build, Remodel, Repair Now," while prices of materials are low and labor abundant. Reports indicate that since the launching of an advertising campaign, permits for building, plumbing and electrical work in Memphis have increased nearly 100 per cent, as compared with a similar period before the campaign was started. Two full-page newspaper advertisements and four half-page advertisements have been used to set forth the advantages of the movement, and 2000 copies of a booklet listing the names of 236 subscribers to the campaign in 41 different lines of building trades have been distributed. In addition, more than 350 banners have been placed on trucks.

For Western North Carolina

Plans for the creation of a regional organization for western North Carolina are expected soon to materialize into a constructive movement for promoting the various interests of that area. The movement has been sponsored largely by F. Roger Miller of Asheville as temporary chairman of a large committee of men and women. Major activities proposed for the contemplated organization are: (1) Advertising; (2) regional planning; (3) resorts, parks and playgrounds; (4) industrial research and promotion; (5) public affairs, state, county and municipal; (6) real estate and general development. Mr. Miller is vice-president of Grove Park Inn, Inc.

Six Industries for St. Louis

St. Louis, Mo.—According to the monthly report of the Industrial Bureau of the Industrial Club of St. Louis, six new industries were established in St. Louis during May and seven existing establishments expanded their facilities. New construction involved 22,765 square feet of floor space, while 194,000 square feet of existing space were absorbed. More than 300 additional factory workers will be employed.

Georgia Plans for Prosperity

All State Enlists Under Constructive Business Leadership

Atlanta, Ga., June 22.

Nonpolitical organization of Georgia's ablest citizens for utilization of the state's economic resources, the marketing of its products and the coordination of capital, labor and agriculture for the welfare of all, is the objective of a Committee of One Hundred. Sixty-seven members of the committee have agreed to serve at the outset, the others to be appointed. Preliminary organization was directed by Charles F. Redden, who for several years has led in the development of the Georgia coast, particularly at Sea Island Beach. The Georgia Bankers Association at a recent convention indorsed the work of the new group and pledged it full support.

Leaders of the committee have outlined its functions as follows:

To enlist and organize the brains and experience of Georgia, and set them to work on constructive, cooperative lines.

To bring about a realization that all citizens must cooperate for state and civic welfare in peace as in war.

To consolidate, co-ordinate and direct along parallel lines the efforts and influence of the many commercial, agricultural and civic organizations.

To create a non-political channel through which the responsible interests of the state can conduct a state-wide campaign for education as to Georgia's needs and frame suggestions for remedies.

To create a permanent economic council, representative of capital, labor, agriculture and the public, as a clearing-house for facts and plans; to formulate definite practical measures to regulate and remedy, as far as possible, the employment problem; and to endeavor so to regulate production and demand as to mitigate a repetition of the unemployment situation.

To encourage more extensive use of Georgia farm and factory products.

To encourage adoption of modern merchandising methods for farm, dairy and poultry products, and create a national reputation for the superiority of Georgia products.

To produce diversified farming and encourage the "live-on-the-farm" movement.

To develop the marketing of graded, identified and selected farm products.

To stimulate extension of electric power service through rural areas; encourage community development; create councils for the improvement of industry,

transportation, reforestation and education.

Those already serving on the committee are:

Colonel Sam Tate, president of the Georgia Marble Company, Tate, Ga., and former chairman of the state highway board; Eugene R. Black, governor of the Atlanta Federal Reserve Bank; Mills B. Lane, chairman of the board of the Citizens and Southern National Bank, Savannah; Preston S. Arkwright, president of the Georgia Power Company; Howard E. Coffin, automotive engineer and developer of Sea Island Beach; W. D. Anderson, president of the Bibb Manufacturing Company; John M. Graham, Rome, former president of the Georgia Bankers' Association; Samuel C. Dobbs, Atlanta, investment banker, former president of the Coca-Cola Company, and of the Associated Advertising Clubs of the World; T. L. Huston, Butlers Island, Ga., sportsman, banker and planter; Andrew C. Erwin, Athens, president of the Southern Mutual Insurance Company; Wiley L. Moore, Atlanta, president of the Wofford Oil Company; John S. Cohen, editor the Atlanta Journal; Clark Howell, editor the Atlanta Constitution; Herbert Porter, general manager the Atlanta Georgian-American; W. T. Anderson, editor the Macon Telegraph; W. C. Bradley, president of the Columbus Bank and Trust Company; Robert W. Woodruff, president of the Coca-Cola Co.; B. O. Sprague, president of the Savannah Sugar Refining Corporation; A. C. Read, president of the Read Phosphate Company, Savannah; John W. Cheatham, president of the Georgia-Kincaid Mills, Griffin; Thomas K. Glenn, Atlanta, chairman of the board, First National Bank; L. W. (Chip) Robert, Jr., president of Robert and Company, Inc., Atlanta; Frederick J. Paxon, president, Davison-Paxon Co.; William Murphy, Savannah, president of the Citizens and Southern National Bank; William C. Vereen, Moultrie, president of the Moultrie Cotton Mills and the Moultrie Banking Company; William Candler, Atlanta, president of the Atlanta Biltmore Hotel; J. B. Key, Columbus, president, Merchants and Mechanics Bank; Mell R. Wilkinson, Atlanta, chairman of the directorate of Ashcraft-Wilkinson, Inc.; H. V. Jenkins, president, Savannah Morning News; Ronald Ranson, Atlanta, president Georgia Bankers' Association; Ivan E. Allen, president Ivan-Allen-Marshall Co.; G. Arthur Gordon, Savannah, cotton broker; Robert Strickland, Jr., Atlanta, vice-president First National Bank; I. S. Ferguson, Augusta, vice-president Citizens and Southern National Bank; W. E. Page, president, R. W. Page Corporation, Columbus; Harry P. Meikleham, Lindale, president Pepperell Manufacturing Company; B. H. McLeod, president Bank of Tifton; Henry Blun, Savannah,

president Liberty National Bank and Trust Company; Millard Reese, Brunswick, attorney; J. Clay Murphey, Macon, of Murphey, Taylor and Ellis, Inc.; Lee S. Trimble, Augusta, vice-president, Georgia Railroad Bank and Trust Company; G. Ed Maddox, Rome, attorney; Cason J. Calloway, LaGrange, executive of the Calloway Mills; Porter J. Pierpont, Savannah, Pierpont Manufacturing Company; Louie Morris, Hartwell, president Georgia Press Association; Hatton Lovejoy, LaGrange, president Georgia Bar Association; H. Lane Young, Atlanta, executive vice-president Citizens and Southern National Bank; Robert F. Maddox, Atlanta, chairman executive committee, First National Bank; Thomas M. Hoynes, Savannah, executive of the Standard Oil Company; James D. Robinson, Atlanta, executive vice-president, First National Bank; E. George Butler, Savannah, secretary-treasurer John G. Butler Company; H. C. Foss, president Savannah Electric and Power Company; Barry Wright, Rome, attorney; R. C. Hoffman, Jr., Atlanta, vice-president Southern Cities Public Service Company; Judge A. B. Lovett, Savannah; W. R. Luttrell, Columbus, vice-president, Fourth National Bank; A. L. Church, Brunswick, president National Bank of Brunswick; James T. Anderson, Marietta; Miller S. Bell, president Milledgeville Banking Company; Thomas L. Barrett, Jr., Augusta, broker; A. J. Strickland, Valdosta, president A. J. Strickland Company; T. I. Denmark, Athens, executive vice-president Citizens and Southern National Bank; W. S. Peebles, Cartersville, executive of Virginia Iron, Coal and Coke Company; Jack Williams, publisher Waycross Journal-Herald; Thomas J. Hamilton, editor the Augusta Chronicle.

The committee has opened offices in suite 317-319 William Oliver Building, Atlanta.

May Ship 75,000 Bales Cotton

Jacksonville, Fla.—The Municipal Cotton Compress here, recently leased to Anderson, Clayton & Co., Houston, Tex., will be taken over by that company July 1, according to the office of Ernest E. Anders, city utilities commissioner, and will be put into operation soon after that date. Operating under a three-year lease, the lessees are said to have guaranteed a minimum annual shipment of 20,000 bales of cotton through the city docks, but officials of the company plan to ship as many as 75,000 bales from Jacksonville in the next 12 months.

IRON, STEEL AND METAL MARKET

Steel Tells No New Story This Week

Pittsburgh, June 22—[Special.]—Steel demand has had only a slight decrease, as to the total, in the last couple of weeks, whereas during April and May there was a sharp decrease, nearly matching the sharp increase that had occurred previously. The major part of the loss in the last two or three weeks has been in rails and automobile steel. Rail production in the Chicago district went below 30 per cent last week while production in other districts was lighter still, except in Alabama, where there is the highest rail operating rate, likely to be maintained for a time as the Seaboard Air Line has just placed its third 1931 rail order with the Tennessee company, for 6000 tons.

In the industry as a whole, steel ingot production averaged 36 per cent last December, the low point, increased to about 56 per cent for the third week in March, the peak, and declined rather sharply to about 40 per cent for the first week in June, being at about 38 per cent last week, or two weeks later. Next week or week after there will probably be a particularly low point as some plants are likely to close entirely, but that is merely a seasonal incident. With May having averaged 45 per cent according to the official report, June may be estimated at slightly under 40 per cent and July at slightly under the December rate of 36 per cent. It has been the usual thing for July to run under December but early in the year hopes were entertained that there would be such improvement as would prevent such a showing. There is every reason to expect sharp seasonal improvement immediately after July.

The 15 per cent increase in freight rates asked by the rail carriers would bear heavily upon the iron and steel industry, so much of its cost being in freights, and would hardly help materially as to steel orders. The steel industry recognizes the serious plight of the railroads, however, and is unlikely to interpose any serious objection.

Steel demand is so low all around that there are few points of interest. Among the finishing lines tin plate is naturally doing the best as it is almost wholly an article of current consumption. The industry is running at fully 65 per cent, having had its usual seasonal decrease in the last few weeks. Consumption of packers' cans is likely to be off a trifle from last year, general line tin plate consumption is about the same, and there

is a large decrease in exports. Next to tin plate probably comes standard or merchant pipe, with structural shapes next. Wire is at the bottom of the list of important steel products. For years it has been suffering from decrease in housebuilding, and in boxes and crates being replaced by fiber containers. Demands from the agricultural sections have been almost nothing in the last few weeks but much increase is expected on the harvesting of crops even if the crops do bring low prices.

Fabricated structural steel shipments are far from heavy, but there is a fair order book, some of the larger jobs involving extended delivery. Taking the country as a whole there has been an unusually large proportion of small jobs in the last few months.

Automobile production is in a sharp decline, following the 4 per cent decrease from April to May. Close estimates for the nearby future are impossible as each of the two largest producers is expected to have a shutdown and the times are not known.

Finished steel prices present little of interest. They are holding in general and few changes are in prospect. Sheet and strip mills are quoting higher prices on third quarter contracts, but buyers are not interested in such coverage, and it is doubtful whether the going markets, on prompt orders, can be advanced. Sheets as a matter of fact have weakened a trifle more in the last week. Nails to jobbers remain at the very low price of \$1.80 and it appears producers will take forward business at this level.

In a general way, the big steel companies are unlikely to show much if anything earned this quarter against preferred dividend requirements. Production is off 7 to 8 per cent from the March quarter, invoice prices average a trifle lower, and unit costs are higher with the lighter operation.

Metals Again Reach Low Figures

New York, June 22—[Special.]—Though during the previous week prices of some of the metals were inclined to advance, the chief price changes over the past week have been on the downside. Zinc prices have slipped off somewhat after their rather spectacular advance. Tin prices have been selling down somewhere near the bottom point of the year which had been the low point for all time. Copper is back to 8 cents per pound, or lower, after having been

regarded as 8¼c per pound for several days.

Among the minor metals quicksilver has yielded ground, selling as low as \$90 per flask of 76 pounds, the lowest in years, though importers are refusing to sell below \$102 per flask. Antimony has been a shade higher at a bit over 6c per pound, duty paid. Buying of the metals has been rather light. Silver is steady at 26½c per ounce or higher.

One of the principal events of the week in metal circles was the introduction of trading in silver futures on the National Metal Exchange. This of course is mostly a matter of dealing in paper contracts, though at times actual silver is delivered on an expiring contract, there being metal in warehouses to cover the transaction. Much interest was shown in the trading in the first few days, the banking fraternity having engaged in transactions in addition to metal and commodity houses. On the opening day \$410,000 represented the gross transactions; on the second day nearly that amount changed hands, but there was a considerable slump the third day. Sponsors of the movement state that it will make a very liquid market and allow the world to know the price of silver at any moment while the exchange is in session. Moreover, bankers will be enabled to hedge transactions in actual commercial bar silver against operations of the exchange. Previously the National Metal Exchange has dealt only in copper and tin.

Though many economists state that the worst of the depression is over there are not as yet many tangible evidences of betterment in the metal producing and consuming industries. Copper statistics for May showed an increase in surplus stocks of refined metal by nearly 31,000 tons to nearly 400,000 tons, a new high water mark. Lead stocks gained nearly 9000 tons in May though June and July figures will surely be better because of much improved sales for June and July shipment.

Automobile production has declined considerably, the estimate for June production being 270,000 cars and trucks for the United States and Canada as against around 350,000 cars monthly in the early spring. Steel operations have declined to 38 per cent of capacity and further declines are expected. Tin plate producers, on the other hand, keep up their rates better than the industry as a whole, the tin plate average being 65 per cent of capacity.

The makers of galvanized sheets have advanced prices about \$3 per ton and

may be willing to pay higher prices for their zinc used for coating. The price of zinc ore in the tri-State district is unchanged at \$21 which is disappointing to many in the trade as it was hoped that the recent rise in slab zinc would bring ore up along with it.

The American Smelting & Refining Co. will close smelters and refineries producing lead in Utah and Montana to relieve the overproduction situation, the closing to be effective July, August and September.

World production of copper in May was lowest in daily rate for many years and was about 90 tons daily below production in April. Total output was larger than for the preceding month, or as 130,486 tons compares with 128,877 tons, because it was a longer month. World copper production has been virtually unchanged for several months which suggests that production has been cut to an irreducible minimum and that improvement in the situation must come from increased consumption.

Surplus stocks of copper in North and South America gained nearly 31,000 tons during May, standing at nearly 400,000 tons, the largest in history. The best feature of the statistics pertained to blister stocks, which fell nearly 3000 tons to the lowest total in nine years.

The best business of the week has been transacted in lead, purchases having been the largest in eleven months. All classes of consumers were purchasing and all sections of the country were being heard from. Lead stocks gained nearly 9000 tons in May, but prospects are that the statistical situation for June and July will be much better.

Export price of copper was reduced 1/4c per pound on Thursday to 8.275c per pound, to bring it into line with a domestic quotation of 8 cents. Export sales on Thursday were 2000 tons as against 100 tons on Wednesday. Domestic copper users are trying to purchase for 1932 shipment, but foreign consumers are purchasing but three months ahead.

Readjusting to Conditions in the Birmingham District

Birmingham, Ala., June 22—[Special.]—Readjustment of costs of production is being followed in iron and steel circles in this section. A number of office, engineering and chemistry department workers have been sacrificed, and in some instances a wage reduction has been put into effect. In some of the mills of varied industries there is steady operation for a week, then shut down, other departments being given the activity. In steel mills it is pointed out that

in avoiding heating and reheating furnaces, savings can be accomplished and costs of production lowered and at the same time average output obtained.

The pig iron selling has eased off a little more. For many weeks now sales have been low; numerous instances are reported of an order for one car, delivery immediately being specified. Furnace interests have shown an interest in this business, making shipment promptly. Further curtailment of output is planned again, two iron-makers to be blown out by the end of the month.

Reports from melters do not give great encouragement for the early future. The cast iron pipe producers, always the steady melters, have been looking forward to an impetus in demand but the market is designated week after week as being slow, prices uncertain. Price base is stated at \$35.00 to \$36.00 on six-inch and over sizes. However, reports will not down that concessions have been allowed. Production continues at 40 to 60 per cent capacity. Centrifugal pipe is in demand with much pipe moving to the West and far-West. Machine shops and foundries still report trade easing off. Considerable work has been done up to this time in some of the larger foundries of the district. The smaller users of iron, stove foundries and others are reporting their trade slow.

Sales of iron for third quarter delivery have been few, with several tonnages of 150 to 300 tons each reported sold for delivery in the East in the next 90 days, but nothing as yet announced as to home territory.

Structural steel fabricators as well as manufacturers of steel have reduced of-

fice and departmental forces, to lower costs and eliminate expense.

Scrap iron and steel is slow. The coke market also is rather uninteresting with production kept at a fairly good average. Coal is quiet, with lessened output at the mines. Many miners are receiving but scanty time and earnings are low.

Production and shipment of Portland cement in this section is above 65 per cent capacity. This is termed seasonal rather than any improvement otherwise.

The Alabama Legislature has given favorable consideration to legislation which will bring about a gradual reduction of taxes on coal and ore as it is mined, a saving of \$200,000 to \$300,000 per annum to be brought about in this industry.

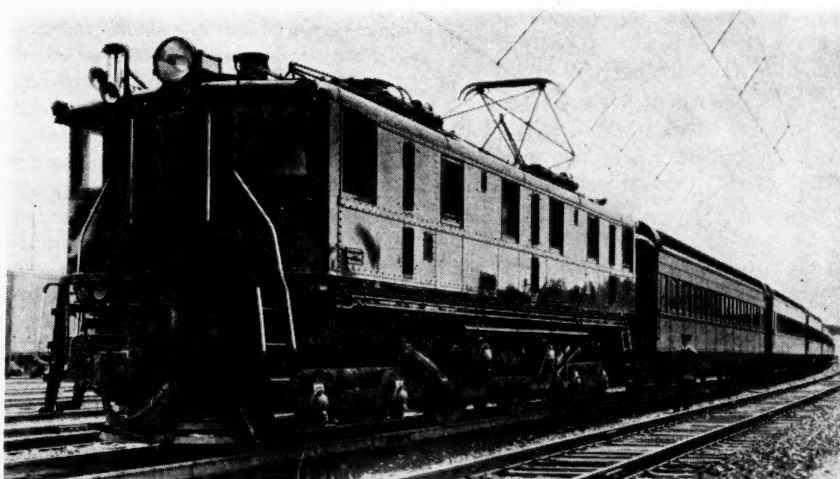
PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, \$12.00 to \$13.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$12.50 to \$13.50; iron of 2.75 to 3.25 per cent silicon, \$13.00 to \$14.00; iron of 3.25 to 3.75 per cent silicon, \$14.50 to \$15.00.

OLD MATERIAL

Steel rails	\$10.00 to \$11.00
Steel axles	12.00 to 12.50
Iron axles	12.00 to 12.50
Heavy melting steel.....	8.00 to 9.00
No. 1 cast.....	9.00 to 10.00
Stove plate	7.00 to 8.00
No. 1 railroad wrought.....	8.00 to 8.50
Car wheels	8.00 to 9.00
Tramcar wheels	8.00 to 9.50
Machine shop turnings.....	4.50 to 5.50
Cast-iron borings	4.50 to 5.50
Rails for re-rolling.....	10.25 to 11.00

Haywood County Commissioners, Waynesville, N. C., commissioned Willard G. Rogers and N. G. Rhodes, Charlotte, N. C., as architects for a new \$230,000, three story courthouse to be erected at Waynesville.



Pennsylvania Railroad Class O-1 Electric Locomotive

This type of locomotive is being used in experimental service between Wilmington and Trenton and is under consideration for through electrified service for the line between New York and Washington when completed.

HIGHWAYS AND MOTOR TRANSPORT

TEXAS CURBS MOTOR TRUCK OPERATIONS

Limiting Load to 7,000 Pounds to Seriously Restrict Motor Truck Transportation Say Truck Line Owners

Owners of motor truck transportation lines in Texas declare drastic laws recently passed by the Legislature regulating the operation of motor trucks may drive such lines out of business. Passage of the regulatory laws is heralded as a signal victory for the rail lines. One bill is designed to stop commercial handling of cotton by trucks from interior points to deep water ports. The measure limits transportation by motor trucks not fully enclosed to 10 compressed square bales, or 20 round bales. Moreover, gin-baled cotton must be compressed at the first compress on the way to point of export.

Another measure limits the maximum load of motor buses or trucks operated on a state highway to 7000 pounds compared with an average of 15,000 pounds heretofore allowed. However, the weight of the bus or truck is not limited. The maximum length of a truck was set at 35 feet, and of a combined truck-trailer at 45 feet.

Certificates of convenience and necessity will be required of the Railroad Commission for common carrier trucks. The Commission is authorized to prescribe the character of commodity to be transported and the manner in which trucks may be loaded. No permit for operation of contract carrier trucks is required, although the Commission is vested with the power of setting minimum rates for such carriers.

C. E. Craddock of Dallas, vice-president of the Mack-International Motor Truck Corporation, in commenting on the passage of the regulatory bills says:

"House Bill 336 provides that no motor vehicle or combination of vehicles with a load (payload) of more than 7000 pounds may be hauled, unless the load is being hauled to a common railway point, in which case there may be a payload of 14,000 pounds.

"The railroads have been very persistent in their efforts to eliminate motor transportation in the one State in the Union which has the most outstanding need for this service. Texas has several counties as large as the State of Rhode Island with no railroads touching or crossing the county.

"No mention is made of the gross

weight of the vehicle, which, by all engineering practice, is the limiting factor in determining the impact to the road. The railroads claim that House Bill 336 is for the protection of the roads and the lives of the citizens, yet a bus weighing 18,000 to 20,000 pounds may be operated over the roads just so long as they do not exceed 7000 pounds payload.

"This bill is obviously a railroad bill and although it passed both Houses of the Legislature with overwhelming majorities and despite the fact that the Governor may permit it to become a law, the economical transportation of merchandise over the State highways of Texas cannot be overlooked."

240,000-Barrel Cement Order

Memphis, Tenn.—The Marquette Cement Manufacturing Co., Chicago, submitted low bid for furnishing 240,000 barrels of cement for concrete revetment operations in the Memphis district, according to the United States District Engineer's office here. The bid of the Marquette company was \$1.30 per barrel f. o. b. government barges or freight cars at Cape Girardeau, Mo. Delivery is to be made at the rate of approximately 25,000 barrels weekly and revetment operations are to begin about July 1.

To Dedicate Barron G. Collier Bridge

The Barron G. Collier concrete and steel highway bridge across Peace River at Punta Gorda, Fla., completed at a cost of more than \$800,000, will be dedicated with appropriate ceremonies on July 4. This 4375-foot structure is the third in a series of four bridges, similar in construction, built by the Florida State Road Department as part of the improved Tamiami Trail. Completion of the Trail across the southern peninsula of Florida through the trackless Everglades was a major engineering feat of 1928.

Last February the Thomas A. Edison bridge across the Caloosahatchee River at Fort Myers was dedicated, on the 84th birthday of the famous inventor, with Gov. Doyle E. Carlton and Chairman Robert W. Bentley and members of the road department present. The first of the Tamiami Trail bridges was completed at Bradenton three years ago. These two bridges were constructed at a cost of more than \$1,000,000. The fourth of the series, a structure crossing Gordon Pass at Naples, is about 30 per cent complete. It is the smallest of the four, and will complete the modernization of the Trail between Tampa, Fort Myers and Miami.

Contract for the Punta Gorda bridge was let to the Raymond Concrete Pile Co., New York, in October, 1929. Construction was started in December of the same year, and the bridge was completed in March, 1931.

The Barron G. Collier bridge consists

of 756 24 by 24-inch piles, each 65 to 75 feet long, and driven in 6-pile bents, with exception of the end bents which contain 9 piles each. There are 125 bents on 34-foot centers, plus a 125-foot bascule span with piers resting on a wood pile foundation consisting of 234 piles approximately 40 feet long. The Raymond company drove the piles and placed the concrete in the bascule piers; the steel work and machinery were handled in a separate contract. The bridge has a 27-foot roadway and a 5-foot sidewalk, and is built at an elevation about 19 feet above water. The double cantilever bascule span, operated by electricity, is equipped with automatic electric safety gates. The bridge contains 18,536 cubic yards of concrete exclusive of the handrail.

The bascule span was constructed and put into place by the Tampa Shipbuilding & Engineering Co., Tampa, Fla.

Sub-contractors and material dealers connected with the project included the following:

Dredged embankment—J. L. Lofton Construction Works, Fort Myers, Fla.

Hand rail—Florida Bridge & Construction Co., Orlando, Fla.

Cement—Florida Portland Cement Co., Tampa, Fla.; Lehigh Portland Cement Co., Allentown, Pa.

Reinforcing steel—Gulf States Steel Co., Birmingham, Ala.

Sand and gravel—Lanier & Company, Jacksonville, Fla.

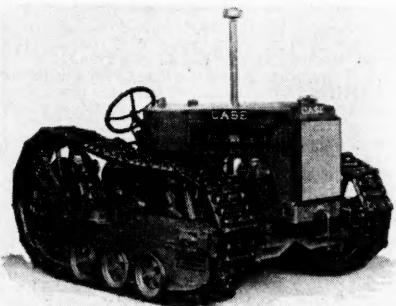
Rolled phosphor bronze expansion joint plates—Riverside Metal Co., Riverside, N. J.

Steel castings for gears—Mobile Pulley & Machine Works, Mobile, Ala.

NEW AND IMPROVED EQUIPMENT

Case-Trackson Crawler Tractor

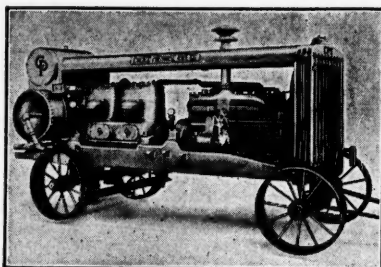
The Trackson Company, Milwaukee, Wis., manufacturers of crawlers and tractor equipment, announce the new model CD Case-Trackson crawler tractor powered by the Case "CI" tractor made by the J. I. Case Company, Racine, Wis. This combination has been developed to meet power needs of industrial users requiring a flexible, economical unit for work under varied ground or weather conditions, and is suited both to drawbar use and to the operation of other equipment. A low speed provides abundant power for heavy hauling, while a medium speed is said to furnish ample power for average jobs and a high speed for light drawbar work and quick return trips. The wide, ground-gripping crawlers are made entirely of steel, and the track shoes are cast in one piece of electric alloy steel, heat-treated and hardened to give extra strength. For the power plant a heavy duty, 4-cylinder, vertical, valve-in-hand engine is used; it may be throttled down under governor control.



A Flexible Unit

New CP Portable Compressor

The Chicago Pneumatic Tool Company, New York, has announced an addition to the CP line of portable compressors. This new machine, having a capacity of 360 cubic feet per minute, permits the use of an additional number of rock



Powered by 6-Cylinder Engine

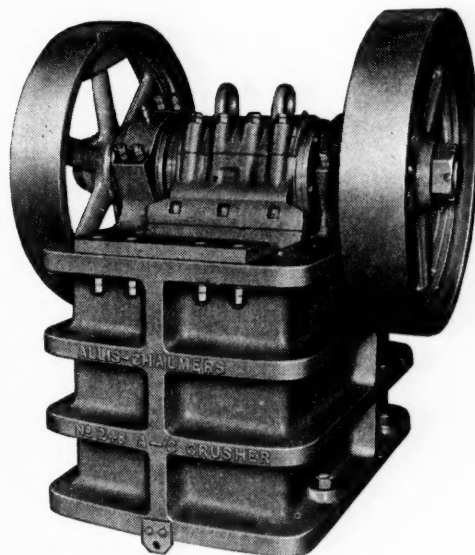
drills, pavement breakers, clay diggers, backfill tampers and similar pneumatic tools. The compressor is of the vertical 4-cylinder single-acting type, cylinders being completely water-jacketed, cast in pairs and bolted to the crank-case. Inlet and discharge valves are of the Simplate design, especially adapted to high-speed operation; the crank-case and piston are of close-grained cast iron, and connecting rod and crank-shaft are of open hearth steel. The power plant of this unit is the Hercules Model HXE, 6-cylinder, heavy duty engine.

A Smoke Density Gauge

Designed for the purpose of giving the furnace operator a continuous picture of smoke conditions, the Smoke-meter, a simple form of smoke gauge, has been introduced by the Sales Corporation, Richmond, Va. The instrument consists of a projector throwing a beam of light across a smoke passage; this passage may be a boiler uptake, breeching or stack. The beam, after crossing the passage, falls on an indicator having a central shadow screen and smoke particles in the beam cast shadows on this screen. By means of the Smokemeter, it is said that the fireman is able to observe smoke conditions in each boiler and thus control combustion conditions as easily as other variables of his operation.

Fine Reduction Jaw Crusher

A new type of jaw crusher for quantity production of fine stone has been developed by the Allis-Chalmers Manufacturing Company, Milwaukee, Wis. This crusher, No. 248, is said to make it possible—within certain limits of capacity and reduction—to produce in a single operation a finished product such as is usually obtained by using a primary crusher followed by a finishing machine. In design, it is a departure from other types of Allis-Chalmers jaw crushers, having but one toggle plate and no pitman, the swing jaw being mounted on the eccentric shaft from which it receives its reciprocating motion. Simplicity is a feature of design, with few working parts, while bearing troubles have been minimized by the use of roller bearings in eccentric shaft and frame.



Finishes Reduction With One Operation

Combination Tape and Rule

The Lufkin Rule Company, Saginaw, Mich., manufacturers of measuring tapes, rules and precision tools, announce a 6-foot measure combining the convenience of a pocket tape and the utility of a rule. This "Crescent" Tape-Rule consists of a steel tape that automatically winds into a sturdy case only 2 inches in diameter; yet when withdrawn it is rigid like a rule. The line or rule blade is of high quality tempered steel, stiffened by special forming; it is nickel plated and has dark markings.



Lufkin Tape-Rule

In use the rule blade is withdrawn manually, returned automatically and is always under control. A simple pressure on a push button recoils it in the case.

CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ark., Little Rock—City. E. E. Stansberry, City Engr., enlarge airport and grade additional runways. 5-28

Ark., Texarkana—American Airways, Inc., James P. Farnham, Engr., reported, let contract to Hardy Brothers Construction Co. for office building at Texarkana Municipal Airport; install sewerage, septic tank and water supply system; reported, soon take bids for runways, etc.

Fla., Miami—U. S. Coast Guard Headquarters, Washington, D. C., F. C. Billard, Rear Admiral, receives bids June 26 for construction hollow tile airplane hangar; 100x100 ft., at Dinner Key Seaplane Base. See Want Section—Bids Asked.

Fla., Tallahassee—Tallahassee Airways, Inc., chartered; C. E. Daffin, 704 N. Monroe St.

Ga., Atlanta—S. Watson & Sons, Opelika, Ala., reported, low bidder at \$40,247 for installation of air beacons on Atlanta-New Orleans Airway for U. S. Government. 6-11

La., Monroe—Ouachita Parish Police Jury approved construction of hangar at Selman field by Southern Transcontinental Airways, Inc.

La., New Orleans—Bureau of Lighthouses of U. S. Department of Commerce, Washington, reported, leased 4½ acres of land about 7000 ft. east of the Shushan airport, now under construction on Lake Pontchartrain for construction of airway radio station; cost \$50,000; will broadcast by radio telephone, weather, landing field and other information to air pilots; Donald J. Detwiler, Airway Radio Electrician, Bureau of Lighthouses, U. S. Department of Commerce will supervise construction of station.

La., New Orleans—Wedell-Williams Air Service, Inc., Whitney Bldg., Raymond Braud, Mgr., reported, construct \$35,000 administration building.

Mo., Kansas City—Transcontinental & Western Air, Inc., Richard W. Dobbins, Managing Director, New York, move operating base from Port Columbus, near Columbus Ohio, to Kansas City Airport; utilize office building and hangar of Flying School; city to construct hangar; cost \$100,000, 400x120 ft.

N. C., Durham—Curtiss-Wright Corp., 27 W. 57th St., New York, reported, making a survey to determine practicability of municipal airport; Frank Pierson, Secy. of Chamber of Commerce, interested; will apply for appropriation should survey be favorable.

N. C., Statesville—Carolina Airways, Inc., capital \$50,000, chartered; C. V. Walton, J. A. Deaton.

Okla., Oklahoma City—City, M. Peshek, Jr., Clerk, receiving bids June 30 on \$50,000 administration building at city airport and on \$15,000 wiring system; building will be 1, 2, 3 and 4 stories; irregular in shape; brick and rein. conc. construction; Langbein & Johnston, Archts. 2-26

Okla., Tulsa—G. J. Bowie, Daniels Bldg., has contract for administration building at city airport; Smith & Senter, Archts., Phil-tower Bldg. 6-18

S. C., Charleston—Dixie Air Transport, Inc., plans weekly air service between Charleston and Asheville, N. C.

Tex., Duncan Field—Kenneth L. Colborn, Inc., Pasadena, Calif., low bidder at \$59,463 for two air corps hangars; A. S. Harrison, Captain, Q. M. C., Constructing Quartermaster, Fort Sam Houston. 5-28

Tex., Fort Worth—City, O. E. Carr, Mgr., votes July 21 on bond issue for administration building and air terminal, Meacham Field; brick and steel; 2-stories; ticket office and baggage room, etc.; cost \$100,000; W. G. Clarkson & Co., Archt., 610 First National Bank Bldg. 4-23

Tex., Randolph Field—Chadwick Machinery Co., 125 Blue Star St., San Antonio, reported, has contract for four air compressors complete with automatic equipment and receivers.

Virginia—A. H. Pettigrew, senior assistant engineer of State Highway Department, Richmond, reported, contract signed with State Highway Department for establishment of two airports at Williamsburg and Manassas; under terms of contract the department will condition the landing fields and local authorities will bring them up to standard required for airports.

Va., Langley Field, Hampton—Constructing Q. M., Fort Monroe, opens bids July 16 for photograph laboratory.

Va., Norfolk—City reported invited Eastern Air Transport Inc., 225 Broadway, New York, to submit a proposal to operate municipal airport.

Va., Williamsburg—City, R. P. Wallace, Pres., City Council, signed contract with State Highway Dept. to construct airport.

Bridges, Culverts and Viaducts

Proposed Construction

Ark., Little Rock—Comms. of West Twelfth Street Road Improvement, Office of Glenn D. Douglass, County Road and Bridge Commr., opens bids June 30 for bridges not included in original project for which contract was let 3 years ago; includes 4 conc. bridges and steel structure; \$56,100.

Ky., Louisville—Dept. of Public Works plans grade crossing elimination through 14th St.

La., Baton Rouge—Special Board of Army Engineers to hold hearing July 1 to obtain additional data on clearances on \$8,537,000 rail-highway bridge over Mississippi River to north of Baton Rouge proposed by State Highway Comsn., N. E. Land, Bridge Engr., Missouri Pacific Railroad Co., F. E. Bates, Bridge Engr., and Louisiana & Arkansas Railway Co., Shreveport; builders seek permit for bridge with 65-ft. clearance.

Md., Towson—War Dept. approved application of Baltimore County Comms. to build bridge across Deep Creek at Marilyn Ave.

Mo., St. Louis—St. Louis-San Francisco Ry., F. G. Jonah, Ch. Engr., probably ask bids Aug. 1 for 4-track viaduct.

North Carolina—Norfolk & Western Ry. Co., W. P. Wiltsee, Ch. Engr., Roanoke, Va., rebuilding and strengthening 15 bridges on North Carolina extension; Virginia Bridge & Iron Co., Roanoke, Va., furnishing steel.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, has low bids for projects in following counties:

Rogers—one 80-ft. truss span and two 36-ft. I-beam spans, U. S. Highway 66, east of Chelsea, R. 85A, Gaines & Yoekum, 519½ W. Main St., Oklahoma City, \$12,979;

Coal—one 80-ft. truss span and one 40-ft. I-beam span, Coal Creek, and one 60-ft., one 36-ft. and one 30-ft. I-beam, Brier Creek, F 245E, J. W. Hopper, 706 W. 31st St., Oklahoma City, \$21,074.

Okla., Arapaho—Custer County, Jesse Hatchett, Clerk, has low bids: South Canadian Bridge, \$271,738, Nims & Frost, Hydro; Beaver Creek Bridge, \$11,252, Ledford & Way, Walters; East Barnitz Creek Bridge, \$7206, same contr.; West Barnitz Bridge, \$7276, same contr.; Ralph James Engineering Co., Consit. Engrs., 519½ W. Main St., Oklahoma City.

SOUTH CAROLINA—State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, received low bids for bridges in following counties:

Aiken—1200 ft. approach to Savannah River bridge, Route 25, between Augusta and North Augusta, Kiker and Yount, Reidsville, N. C., \$80,437.

Cherokee—substructure and conc. approach span for 1035-ft. rein. conc. and steel bridge across Broad River, U. S. Highway 29, between Blacksburg and Gaffney, R. H. Blackwell, Kingsport, Tenn., \$59,744; struc. steel superstructure, Dewey Brothers, Inc., S. George St. ext., Goldsboro, N. C., \$47,894.

Newberry—Fairfield—addition to Broad River bridge at Strother on Route 22, Palmer Construction Co., Florence, \$13,364.

Greenwood—Newberry—rein. conc. substructure and conc. approach for 998-ft. bridge over Saluda River, Route 22, between Greenwood and Newberry, George Thomason & Co., Greenwood, \$75,478; street superstructure, Austin Brothers Bridge Co., 1195 Mickleberry St., S. W., Atlanta, Ga., \$15,149.

McCormick—456-ft. conc. bridge over Long Cane Creek, Route 20, D. M. Rickenbaker, Union, \$30,159.

Spartanburg—100-ft. bridge over Holston Creek, 125-ft. bridge over Motlow Creek and a 350-ft. bridge over South Pacolet River, Route 176, D. M. Rickenbaker, \$37,048.

SOUTH CAROLINA—State Highway Comsn., Ben M. Sawyer, Ch. Commr., received low bids for bridge projects in following counties:

Greenwood—300-ft. rein. conc. bridge over Wilson Creek, Route 22, C. D. Fulmer, Leesville \$16,522.

Newberry—525-ft. rein. conc. bridge over Little River, Route 22, D. M. Rickenbaker, Union, \$30,159.

Chesterfield—200-ft. rein. conc. bridge over Juniper Creek, U. S. Route 601; alternate 1, F. A. Triplett, Bethune, \$15,897; alternate 2, Florida Bridge & Construction Co., Orlando, Fla., \$17,277.

Colleton—350-ft. I-beam bridge over Asheppee River, Route 32, Florida Bridge & Construction Co., \$10,800.

Aiken—.046 mi. cement conc., U. S. Route 1, approaches to Big Horse Creek Bridge, R. G. Kennedy, Batesburg, \$1637.

Dillon—54-ft. creosoted timber extension, bridge on Route 94 near Lake View, Kershaw County Bridge Dept., Camden, \$1364.

South Carolina—See Roads, Streets and Paving.

South Carolina—State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, opens bids June 29 for crushed stone for bridge surfacing.

Tenn., Memphis—City advertise for bids about July 15 on Summer Ave. Viaduct; \$350,000.

Texas—Mosher Steel & Machinery Co., 5209 Maple St., Dallas, reported, has contract for 530 tons of steel for bridge over Red River, Wilbarger County; W. S. Crawford Co., Contr., 4123 Avondale St., Dallas; Southern States Steel Co., 503 Haskell St., Dallas, reported, has contract for 150 tons steel, bridge in McLennan County, W. S. Crawford Co., Contr., Dallas; Austin Brothers, 1815 Cookhs St., Dallas, reported, has contract for 125 tons steel for bridge in Brown and McCulloch Counties, Austin Bridge Co., Contr., 1813 Clarence St., Dallas.

Tex., Fort Worth—City, O. E. Carr, Mgr., and Texas and Pacific Ry., E. F. Mitchell, Ch. Engr., Dallas, have plans in progress for widening overpass on Frisco belt line.

Tex., San Angelo—Tom Green County Comms. have tentative estimates for two bridges on Highway 30; over Pecan Creek, 10 mi. from San Angelo, \$25,000; over South Concho, at Christoval, \$65,000.

Tex., Schertz—Bexar County Comms., Judge A. Wurzbach, San Antonio, and Guadalupe County Comms., Seguin, and State Highway Comsn., Austin, having plans drawn for steel and conc. bridge over Cibolo Creek; E. P. Arneson, Engr., Gunter Bldg., San Antonio.

Virginia—Department of Highways, Richmond, Va., receives bids July 7 for 2 bridges on Route 31 in following counties:

Henrico—Hanover—Widening 130-ft. bridge over Chickhominy River, to 40-ft. roadway, four 30-ft. conc. beam spans;

Hanover—Widen 32-ft. bridge over Stoney Run to 40-ft. roadway, one 30-ft. conc. beam span.

W. Va., Charleston—Kanawha County Court, J. C. Blackwood, Pres., plans bridge over Poca Fork.

Contracts Awarded

La., Plaquemine—Iberville Parish Police Jury, W. A. Holloway, Sec., has low bid from W. H. Groome & Son, Livonia, for \$11,667 steel bascule bridge, Grosse Tete, 5-21

Maryland—State Roads Comsn., L. H. Steuart, Sec., Baltimore, let contract for double span arch bridge, over Paint Branch at Riverdale, to G. A. and F. M. Wagner, Dallastown, Pa., at \$16,838.

Okla., Oklahoma City—Chicago, Rock Island & Pacific Ry. Co., W. H. Petersen, Ch. Engr., Chicago, Ill., let contract to John W. Fox, El Reno, for Robinson Ave. subway.

Tex., Fort Worth—Tarrant County, W. E. Yancey, Judge, let contract at \$21,366 to Tarrant Construction Co., 1005 N. Calhoun St., for 299-ft. 10-in. rein. conc. bridge over Trinity River on Handley-Elderville Rd.; 110-ft. steel truss.

Canning and Packing Plants

Tex., Harlingen—Texas Citrus Fruit Growers Exchange, John H. Shary, Pres., Mission, plans modern plant here and at San Carlos; conc. basement, second floor hardwood, saw-tooth roof, 100x120 ft.; capacity 10 cars citrus fruit daily; H. H. Ewing, Mission, Archt. and Engr.; complete plans 2 or 3 weeks; probably use Stebler-Parker machinery, and Brodrex process for Brodrexing fruit. 6-18

Coal Mines and Coke Ovens

West Virginia—Consolidation Coal Co., 15 Broad St., New York, operating in Maryland, Pennsylvania, northern West Virginia and Kentucky, to issue \$4,000,000 collateral trust gold notes, which will allow retirement of \$3,101,000 outstanding bonds of Fairmont Coal Co.

Cotton Compresses and Gins

Ala., Mobile—O. M. Gwin Construction Co., 3501 Fern St., New Orleans, low bidder at \$124,969 for Fidelity Compress of Anderson Clayton & Co., Cotton Exchange Bldg., Houston; 70,000-bale storage capacity, equip with high density compress; \$300,000; Frank Sayner, 253 St. Louis St., low bidder for three warehouses at Alabama State Docks for Anderson, Clayton & Co. 6-18

Fla., Jacksonville—Anderson, Clayton & Co., Cotton Exchange Bldg., Houston, Tex., lessees of Municipal Cotton Compress, completed arrangements for taking over compress July 1. 3-19

La., Lake Charles—American Compress & Warehouse Co., Inc., O. T. Pool, Mgr., Shreveport, purchased 12½-acre site, ultimately construct compress plant; include two cotton warehouses, with storage capacity of 15,000 bales, cost \$60,000; high density compress.

N. C., Newberry—Silver Street Ginney, Inc., chartered; R. V. Floyd, John C. Floyd.

Drainage, Dredging and Irrigation

Fla., Miami—W. T. Price, Inc., 3200 S. W. Seventh Ave., applied to U. S. Engineer for permission to dredge channel and basin from foot of S. W. 27th Ave. to present 8-ft. channel 650 ft. off shore; 50 ft. wide, six ft. deep.

La., Cameron—Gravity Drainage Dist. No. 3, John Sells, Pres., voted \$12,000 bonds to construct drainage ditches in and around Cameron; F. Shotts & Sons, Engrs., 921½ Ryaon St., Lake Charles. 5-21

La., Lake Charles—U. S. Engineer Office, New Orleans, making survey of Calcasieu ship channel for maintenance purposes.

La., New Orleans—Bd. of Comms., Port of New Orleans, have low bid of \$10,398 from Alvin M. Fromherz, Queen & Crescent Bldg., for woodwork and painting of wharf shed, Bienville St. wharf.

Tex., Corpus Christi—U. S. Engineers started preliminary survey of intracoastal canal from Corpus Christi to Port Isabel.

Tex., Houston—U. S. Engineer Office, Galveston, open bids July 17 for dredging 7,740,300 cu. yds. material in Houston ship channel; \$954,000; Project includes widening from Morgans Point to a point 4000 ft. above Baytown, and easement of bends at Norsworthy, Manchester, Lynchburg, Harrisburg, etc.

Texas—U. S. Engr. Office, Galveston, let contract to Standard Dredging Co., 323 Guaranty Bldg., Galveston, and 233 Broadway, New York, at \$394,260, for dredging Sabine River-Galveston Bay section of Louisiana and Texas Intracoastal Waterway through Jefferson County and part of Chambers County, Tex. 6-4

Virginia—U. S. Engineer's Office, Washington, consider projects in Dickerson's Bay, Gloucester county; Mosquito Creek, Lancaster county; Urbana Creek, Middlesex county; Windwill Point Creek, Lancaster county;

Va., Norfolk—Director of Operations, U. S. Shipping Bd., Merchant Fleet Corp., Washington, D. C., opens bids June 30 for dredging at U. S. Shipping Bd. terminal, to secure depth of 30 ft. below MLW.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ark., Melbourne—H. W. Wright, reported, granted franchise, install distribution system.

D. C., Washington—Midwest Piping & Supply Co., Inc., 30 Church St., New York, has contract through Ballwood Division, Passaic, N. J., for 403 tons 6-in. to 14-in. steel pipe and 4-in. to 6-in. wrought iron pipe for Capitol power plant steam distribution system; Catalano & Pecora Construction Co., Eastern Ave. and Kresson St., Baltimore, Gen. Contr. 4-23

Fla., Fort Myers—Florida Power & Light Co., Miami, reported, soon begin construction of \$40,000 line along Caloosahatchee Valley section from Fort Myers to LaBelle; 26 miles of new poles and wires will be required; line will branch off at Alva and serve families throughout that community; also serve Olga and Buckingham. 6-18

Fla., Sebring—County Commissioners, reported, granted a franchise to Florida Public Service Co., Orlando; plans to supply electric current to Brighton community, 40 mi. south of Sebring.

Ky., Madisonville—City has proposal from Skinner Engine Co., Erie, Pa., for construction of steam electric plant for \$125,000 and from Fairbanks, Morse & Co., Louisville, proposal for constructing oil operated plant for \$115,000; city may renew electric current contract with Kentucky Utilities Co., Louisville, or construct municipally owned and operated light plant.

La., Oakdale—City, reported, rejected Public Utilities offer for lighting service; may erect municipal plant. 4-2

Oklahoma—Oklahoma Gas & Electric Co., Oklahoma City, completed rebuilding of electric transmission line from Spiro, Okla., to Fort Smith, Ark., connecting there with power plant of Mississippi Valley Power Co.; Oklahoma Gas & Electric Co., on July 1, will take over electric light and power properties of Lamont, recently purchased, will rebuild electric transmission line and distribution system; also rebuild electric distribution system at Morrison; electric transmission line under construction to water wells north of Alva; work under way on

electric transmission line and substation to serve city waterworks of Shawnee.

Okla., Cushing—City recently signed contract with Oklahoma Gas & Electric Co., Oklahoma City, to furnish current for municipally owned distribution system.

N. C., West Jefferson—Northwest Carolina Utilities, subsidiary of East Coast Utilities of Richmond, Va., preparing to construct hydro-electric plant on North Fork of New River, eight miles west of Jefferson, in Ashe County; present plant will be of concrete and stone construction, to be built on what is known as Sharpe Falls, a fall of solid granite 10 ft. high on North Fork of New River; installation will consist of 300 h. p. wheel and generator at the present time; provision will be made for additional installation. 6-11

S. C., Aiken—City voted to submit to a referendum a proposal to place in operation municipal light and power plant.

S. C., Georgetown—Waccamaw Power Co. plans laying submarine cable across Black and Maccamaw rivers at Georgetown, extending from the Brookgreen plantation and Pawley's Island to the city; work to be complete within 60 days; city will install Diesel engine at the municipal plant to furnish power for Waccamaw and other rural lines; later may extend line to Murrels Inlet.

Tenn., Chattanooga—Tennessee Electric Power Co., Chattanooga, reported, authorized by State Railway and Public Utilities Commission, Nashville, to construct 53 extensions in its power line for rural districts; extensions include vicinity of Cleveland, Concord, Ball Camp, Daisy, Rockford, Jamestown, Mt. Pleasant, Jacksboro and Helenwood; construction to begin at once. 2-5

Tenn., Maryville—City considering white way.

Tenn., Memphis—Memphis Power & Light Co., erect power and light building, Payne Ave.; 1-story; 23x46 ft.; brick and conc.; fireproof; cost \$120,000; Phoenix Utility Co., P. O. Box 59, Gen. Contr. 3-26

Texas—Fegles Construction Co., Ltd., Engrs.-Constructors, Minneapolis, Minn., general contractors for Emery, Peck & Rockwood Development Co.'s development, advises following have been awarded principal material and equipment contract: Marsh & Truman Lumber Co., 332 S. Michigan Blvd., Chicago, Ill., lumber; Austin Brothers, 1815 Coombs St., Dallas (for Colorado Fuel & Iron Co.), for reinforcing steel; Johns-Manville Sales Corp., Minneapolis, expansion joint material; Crane Co., Minneapolis, sluice way valve; A. J. Eldridge, Columbus, Ohio, Lidgerwood equipment and cableway; General Electric Co., 1801 N. Lamar St., Dallas, transformers; Wallace & Tiernan Co., Inc., Praetorian Bldg., Dallas, motor, filter and chlorinator; T. E. Wiggins, Inc., Insurance Bldg., Oklahoma City, Okla., sand; Allis-Chalmers Mfg. Co., Frost Bldg., San Antonio, pump equipment; Peden Iron & Steel Co., 700 N. San Jacinto St., Houston, rail; W. F. & J. F. Barnes Lumber Co., 500 S. Eighth St., Waco, timber and lumber; Equipment Corporation of America, 1154 S. Washtenow St., Chicago, Ill., equipment; J. W. Bartholow Co., 1221 S. Lamar St., Dallas, batching plant; Blaw-Knox Co., Pittsburgh, Pa., steel forms and trusses; Fargo Engineering Co., Conslt. Engrs., 120 W. Michigan Ave., Jackson, Mich. 6-18

Tex., Cuero—Central Power & Light Co., San Antonio, reported, let contract to H. F. Bernhard, 950 Drexel St., San Antonio, for office building to replace burned structure; stucco, brick and stone; terrazzo floor; tile and cast stone trim; corner entrance Main and Esplanade Sts.

Tex., Dalhart—West Texas Utilities Co., Abilene, reported, acquired electric, water and ice properties.

Tex., Palestine—Texas Power & Light Co., Dallas, reported, construct electric line Palestine to Sinclair pumping station, nine miles; Texas Power & Light Co. will supply power for pump station units.

Tex., Temple—Texas Power & Light Co., Dallas, reported, extend white way system for total of 87 city blocks.

Va., Martinsville—City, reported, completed preliminary plans for improving Smith River power plant; provide for an increased capacity of plant by erection of crest gates six ft. high on top of present dam; constructing power house below or adjoining the dam; Saville & Williamson, Inc., Engrs., Richmond; approved contract to General Electric Co., Schenectady, and S. Morgan Smith Co., York, Pa., for electrical and water power machinery for power house. 5-21

W. Va., Huntington—U. S. Engineer Office receives bids June 29 for 6600-volt, river crossing at Lock No. 8, Kanawha River.

Fertilizer Plants

Ark., Helena—Paul Horton, 508 Cherry St., interested in establishing fertilizer plant; grind fish pulp.

Flour, Feed and Meal Mills

Miss., Meridian—Meridian Feed & Produce Co., incorporated; D. C. McInnis, Jr., 2229 23rd Ave.

Mo., Monett—Whitlock & Lines purchased Rea-Patterson elevator.

N. C., Henderson—Acme Feed & Milling Co., capital \$50,000, incorporated; C. V. Singleton, Irvine B. Watkins.

N. C., Winston-Salem—Z. D. Hoots, Propr., Hoots Brothers, Linden St., acquired tract of land between West End and Northwest Blvd., near Bethania Rd., for erection of wholesale flour, meal and feed plant; cost \$40,000.

Tex., Denton—James G. Taylor, Hillsboro, reported, acquired Denton Milling Co.'s plant.

Tex., Raymondville—Eastern Seed Co. construct 24x70 ft. sales room and warehouse Hidalgo St.

Foundry and Machine Plants

Ala., Anniston—Lynchburg Foundry Co. (unit of Alabama Pipe Co., 20th St.), reported, plans rebuilding burned finishing department shed.

Tex., Tyler—Mosher Steel & Machinery Co., 5209 Maple St., Dallas, reported, plans expending \$50,000 for building and equipping warehouses.

Garages and Filling Stations

Ala., Selma—Sinclair Oil Co., erect filling station Alabama Ave. and Church St.; white stucco with tile; brick foundation.

Ala., Birmingham—Standard Oil Co., 801 Sixth Ave., S., erect filling station, 18th St. and 10th Ave., S.

Ala., Birmingham—Ben Davis, 249 W. 51st St., erect filling station Third Ave. and Thirteenth St., N.

D. C., Washington—Maxwell Smoot, 906 48th St., N. E., erect filling station 4260 Dane Pl., N. E.; conc. block; metal tile roof; Randolph Dodd, 906 Eighth St., N. E., Builder; L. W. Giles, Archts., 1200 U St., N. W.

D. C., Washington—John W. Lyles, 1702 Summit Place, N. W., erecting filling station, Nichols Ave. and Raleigh St., S. E.; conc. and cement work, brick, tile roof; show windows, metal ceiling; Martin Brothers, Contr., 1341 Connecticut Ave.

D. C., Washington—Jacob Kohner, 909 Seventh St., N. W., remodeling building, 931 G St., N. W. for garage and stores; brick, rein. conc. roof, elec., plumbing, plate glass; Julius Wenig, Archt., Edmonds Bldg.; M. Cladny, low bidder, 4705 Kansas Ave., N. W.

Ga., Atlanta—Sam D. Jones Estate, 1104 Peachtree St., N. E., erect \$17,000 garage and filling station; fireproof construction consisting of conc. cinder blocks, struc. steel, metal and built-up asphalt roof; 73x196 ft.; metal and asphalt roof.

Ky., Pikeville—Scott-Young Chevrolet Co., incorporated; Earl Scott, L. Young.

La., Baton Rouge—Standard Motor Co., Lewis Gottlieb, Pres., having plans prepared by Henry E. Schwarz, Archt., Slattery Bldg., Shreveport, for 1 story, 90x120 ft. addition to Mann-Atkinson sales building, North St., near Jackson Rd.; cost \$25,000; rein. conc. foundation; comp. roof; plate glass windows; plumbing, heating, electric wiring, etc.

Md., Baltimore—Guilford Realty Co., 3330 St. Paul St., erecting 1-story and basement, brick garage, 1005 St. Paul St.; M. A. Long Co., Bldr., 10 W. Chase St.; Palmer & Lamin, Archt., 513 N. Charles St.; Charles A. Russell, 10 W. Chase St., has contract for electric work; James McCrea & Sons, Sisson & 27th Sts., contract for heating and plumbing. 4-23

Md., Baltimore—George L. Schnader, 3111 Berkshire Rd., has contract for garage, 2335 E. Oliver St., for Joseph Vacek; 1-story, brick.

Md., Baltimore—Joseph Kohn erect service station, 4925 Reisterstown Rd.; 1 story, brick.

Md., Baltimore—Kirke Brothers, 1810 Morton St., soon erect filling station, 1811-15 Maryland Ave.; brick and stucco, 1 story. 5-14

Md., Fort George Meade—John M. Kisner & Bro. Lumber Co., 208 Norfolk Ave., Fairmont, W. Va., low bidder for garage for U. S. Army, Office of Constructing Quartermaster.

Mo., Kansas City—Prospect Chevrolet Co., capital \$30,000, incorporated; E. S. Young, 3931 Oak St.

N. C., Columbia—Cohoon-Reynolds Motor Co., capital \$25,000, incorporated; A. J. Cohoon, Sr., J. A. Reynolds.

N. C., Charlotte—Standard Oil Co., 905 W. First St., construct filling station corner of East Morehead St.; cost \$12,000.

N. C., Greensboro—Yellow Taxi Co., incorporated; W. S. Wyrick, 1209 Gregory St.

N. C., Winston-Salem—Piedmont Motor Corp., capital \$100,000, incorporated; J. J. Allen, 1027 S. Main St.

Okla., Oklahoma City—Wm. Neubauer, 421 W. California St., has contract for \$18,000 garage for C. C. Owens, 431 W. 18th St.; 1-story, brick; 50x200 ft.

Tex., Laredo—J. W. Beretta Engineers, Inc., 1203 National Bank of Commerce Bldg., San Antonio, advises no definite action has been taken regarding sales and service garage building for Gateway Chevrolet Co. 5-21

Tex., San Antonio—Jordan-Ivers Motor Co., capital \$30,000, incorporated; James J. Jordan, 1540 Highland St.

Tex., Waxahachie—Humble Oil & Refining Co., Humble Bldg., Houston, let contract to Murphy & Murphy, Mineral Wells, for erection of service station, W. Main and Elm Sts.; Spanish type, brick; 17x80 ft.

Va., Norfolk—Community Service Station, Inc., chartered; B. B. Bott, 108 Poplar Ave.

W. Va., Huntington—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., reported, erect filling station west end of city.

W. Va., Wheeling—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., construct bulk gasoline plant.

Gas and Oil Enterprises

D. C., Washington—Washington Gas Light Co. erect 4,700,000 cu. ft. gas holder; \$265,000; Bartlett-Hayward Co., Baltimore, Bldrs.; Forbes-Murphy Construction Co., 326 St. Paul St., Baltimore, sub-contractor for foundation, let contract for 260 tons rein. bars to McClintic-Marshall Co., Pittsburgh, through Philadelphia office.

Fla., Eustis—Florida Gas Co., subsidiary of Moody-Seagraves, 129 N. Grove St., completing erection of Butane gas plant; Florida Gas Co., 129 N. Grove St., Contr.; has franchise at Eustis, Mount Dora and Umatilla; work begun on laying lines from Eustis to Umatilla and Mount Dora. 4-9

Ky., Bowling Green—Southern Kentucky Oil Producers' Assn., H. T. Downing, Chrmn. Comm., reported, has option on 40 acres of land on Taylor farm at Memphis Junction; as site for refinery; cost about \$40,000; will produce gasoline, kerosene, distillate and fuel oil; will use crude oil produced in Warren, Allen and Simpson Counties.

Ky., Pikeville—Sandy Valley Oil Co., capital \$50,000, incorporated; H. C. Smith, J. M. Trivette.

La., Ruston—City, Mayor Charles C. Goyno, votes July 21 on \$180,000 bonds for building gas main line and distributing system.

La., Shreveport—Pacific Oil Corp., incorporated; Dr. W. J. Stone, Pasadena, Calif.; Jim Pollard, San Mariano, Calif.

Miss., Hattiesburg—Stovall & Halle, Monroe, La., reported, have contract for construction of \$1,250,000 Jackson-Hattiesburg natural gas pipe line for Public Service Corporation of Mississippi, Frank K. McGeehe, 5214 Vanderbilt St., Dallas, Tex.; line will be 8-5/8 inches; 86 mi. long; also construct distribution system at Hattiesburg; Southern Petroleum Co., Jackson, will furnish natural gas. 5-14

Mo., Hannibal—Citizens' Gas Co. filed petition with State Public Service Commission, Jefferson City, to substitute natural for artificial gas; has contracted for supply of natural gas to be delivered at the city's gate by Panhandle Eastern Pipe Line Co.

Mo., Higginsville—City defeated \$55,000 municipal gas bond issue. 5-21

Mo., Mountain Grove—Mountain Grove Gas Co., incorporated; L. R. Flori, St. Louis, C. H. Benage, Pittsburg, Kans.

Okla., Pryor—Mayes County Pipe Line Co. plans laying pipe lines; supply city with natural gas.

Mo., Louisiana—Missouri Edison Co., reported, let contract to L. E. Meyers Co., 20 N. Wacker Dr., Chicago, Ill., at \$26,000, for installation 4 1/2 miles mains for natural gas distribution; company is reconstructing its system to change from distribution of artificial to natural gas; supply to be obtained from Missouri-Kansas Pipe Line Co., 640 Otis Bldg., Kansas City.

Okla., Boynton—City votes July 8 on granting gas franchise to Braman Oil Co., for gas distribution.

Okla., Pryor—Mayes County Pipe Line Co., reported, plans additional pipe lines supply city with natural gas.

Okla., Vinita—City voted negatively on granting 10-year franchise renewal to Vinita Fuel Co.; Geo. Ashby, City Engr. 5-21

Tenn., Nashville—Union Oil Co., incorporated; B. W. Graves, 419 Union St.

Tex., Dallas—Central Crude Oil Purchasing Co., incorporated; W. B. Nelson, A. L. Heine.

Tex., Dallas—Ty-Tex Oil & Development Co., capital \$30,000; incorporated; J. K. Phillips, C. A. Barnes.

Tex., Fort Stockton—Charles Messenger and L. Wadsworth; laying pipeline from Pecos Valley area in Pecos County to Shipley Pool in Ward County, to connect with Wickett Refining Co.'s line to Wickett; distance of 20 miles.

Tex., Fort Worth—City Council called election July 21 to vote on proposed amendments to city charter, giving city authority to contract for supply of natural gas for municipal distributing system; also authority to issue revenue bonds for financing purchase of local distributing system of Lone Star Gas Co.

Tex., Gladewater—Roy E. Burnett and associates, plans erecting refinery; capacity 5000 bbls. daily; cost \$130,000.

Tex., Houston—Coronado Oil Co., incorporated; J. F. Means, Public Natl. Bank Bldg.

Tex., Longview—Lieut. H. W. Turner, Asst. Ch. Engr. of Sabine Engineering Co., and Gen. Mgr. of Gregg Construction Co., reported, announce construction of 3 1/2-mi. pipe line for Cranfill & Germany.

Tex., Mineola—Everybody's Independent Refining Co., incorporated; R. J. Worthington, J. A. D. Smith; plans erecting refining plant on 15-acre site, 2 1/2 miles from city; will equip as 2500 bbl. unit; cost \$150,000; crude oil will be secured from Gladewater; and construction of 4-in. pipe line from Gladewater to Mineola under consideration.

Tex., San Angelo—Jos. Sanger, reported, interested in organizing company to erect oil refinery near San Angelo; acquired refinery at Pioneer; will install new equipment; cost about \$90,000.

W. Va., Huntington—J. P. Atkinson & Co., incorporated; W. M. Topping, 16th St. Road.

W. Va., New Haven—Mason Gas Co., incorporated; Julius Sahn, 3325 Chevoit St., Westwood, Cincinnati, Ohio.

Ice and Cold-Storage Plants

Md., Salisbury—Wm. S. Moore erect warehouse and cold storage building; 2 stories, brick, 90x100 ft.; L. A. Richardson, Archt., 124 E. Main St.; Roland Dashiell, Bldr.

Land Development

D. C., Washington—Maryland Park and Planning Commission, Maj. H. D. Gillette, Ch. Engr., acquired tract of 30 acres lying between Bladensburg Rd. and Baltimore and Ohio R. R., west of Bladensburg along the Anacostia River; will be developed as part of Northwest branch parkway. 3-26

Florida—J. M. Hodgskin, Valparaiso, and 59 Church St., New York, and associates, reported, have options on 70,000 acres on Choctawhatchee Bay and Gulf of Mexico in Walton and Okaloosa counties; plan \$2,000,000 club house, polo field, private race tracks, game preserve, residential development; also port facilities and industrial city at Port Dixie, with railroad connections between Port Dixie and Andalusia, Ala.

Fla., Avon Park—Big Indian Land Co., Inc., chartered; M. A. Smith, G. D. Harvey.

Fla., DeLand—Western Co., incorporated; R. N. Hankal, E. M. Galloway.

Fla., Gainesville—Tung Growers, Inc., chartered; A. Miller, F. D. Bryant.

Fla., Orlando—Orlando Tung Oil Co., Inc., chartered; W. G. Geier, H. Lyon.

Fla., Tallahassee—Thomas J. McGuire, Inc., chartered; T. J. and T. A. McGuire.

Fla., Winter Haven—Marla C. Ireland, Inc., chartered; M. C. Ireland; R. L. Ireland.

Ga., Atlanta—R. M. Kenny, Peters St., develop subdivision adjoining Westwood Ave. and Beecher St.

Ky., Burlington—Ideal Homesites, Inc., capital \$50,000; chartered; J. W. Glasscock, P. Stuart.

Ky., Lexington—East Main Street Realty Co., capital \$42,000, chartered; John L. Buckley, 211 S. Ashland St.

Ky., Mortons Gap—Banks Realty Corporation, incorporated; James R. Harrison, C. Pratt Edwards.

La., West Monroe—City plans development Major McGuire park; develop golf course, landscaping, swimming pool, open air theater, and recreational equipment for children.

Md., Baltimore—George Washington Masonic Caverns, Inc., 10 E. Lexington St., chartered; George Lightcap, Charles E. Parr; operate cavern near Charles Town, W. Va., known as George Washington Masonic Caverns.

Md., Baltimore—City and County Co., incorporated; Henry Kolb, Belman Ave. and Bel Air Rd.

Mo., Independence—Heart of American Fruit Growers, Inc., chartered; E. E. Kirby, Independence; Sterling Evans, Buckner.

Mo., Kansas City—Drury Investment Co., incorporated; B. C. Howard, 1508 Commerce Bldg.

Mo., St. Louis—American Homes, Inc., chartered; Willard H. Guest, 317 N. 11th St.

Mo., St. Louis—Elma Real Estate Co., capital \$25,000, incorporated; Morris E. Tucker, University City.

Mo., St. Louis—Morsons Realty & Investment Co., chartered; Emil J. Morse, 1169 Paul Brown Bldg.

Okla., Guymon—City plans developing 14 acres for a park.

Okla., Oklahoma City—G. A. Nichols, Inc., 115 N. Harvey St., developing Crown Heights subdivision, 41st and 42nd Sts.

Okla., Oklahoma City—National Development Co., J. G. Head, Pres., developing Golf-faire Estates on Newcastle Hwy.

S. C., Darlington—Lunn Realty Co., Inc., W. K. Lunn, L. M. Lawson.

S. C., Gaffney—Furnace Land Co., chartered; J. J. Cudd, Blanche H. Cudd.

Tenn., Knoxville—Park City Development Co., Inc., capital \$20,000, chartered; C. C. Rutherford, 2561 E. Magnolia Ave.

Tex., Abilene—Abilene Realty Co., capital \$25,000, chartered; C. C. Cowden, George L. Paxton.

Va., Lynchburg—James L. Martin, Inc., 211 Wall Bldg., James L. Martin, Pres.; has 1400 acre site; developing 700 acres for apple orchard. 6-18

Va., Norfolk—W. Realty Corp., incorporated; Edw. W. Wolcott, Seaboard Natl. Bk. Bldg.

Va., Richmond—Pease Florist, Inc., chartered; David H. Buker, Varina.

Va., Roanoke—Elmwood Golf Co., chartered; Ira F. Walton, 421 Mountain Ave., S. W.

W. Va., Huntington—Cities Holding Co., incorporated; Olen Charles, 1400 12th St.

Lumber Enterprises

Ga., Valdosta—J. N. Bray Co. will rebuild burned lumber plant.

Ky., Louisville—Hillerich & Bradsby Co., Inc., 434-436 Finzer St., advises recent fire was confined to No. 3 timber yard, a shed used exclusively for storing timber in process of seasoning; golf and bat factories were not damaged; plans for replacing the shed have not yet been completed.

N. C., Charlotte—Wiggins Lumber Co., capital \$50,000, incorporated; J. W. Wiggins, 814 Brookside Ave.

N. C., Mayodan—Mayodan Lumber Co., capital \$100,000, chartered; J. V. Highfill, J. C. Johnson.

N. C., Ravenel—Leodson Lumber Corp., incorporated; R. L. McLeod, M. L. McLeod.

Tex., Dallas—Wood Treating Corporation of North Texas, J. M. Reichenstein, of Cowser & Co., 3121 Grand St., erecting plant at 2913 Gaston Ave.; steel, hollow tile and lumber; install dry kiln and steel vats equipped with chain hoists; also may establish units in other cities of North Texas, possibly at Fort Worth, Waco and Tyler. 6-18

Tex., Port Arthur—Port Arthur Planing Mill Co., Lake Shore Drive and Canal St., plans planing mill; 100x100 ft.; cost \$40,000.

West Virginia—Summitt Lumber Co., Uniontown, Pa., reported, acquired 3000 acres oak timber in Monongalia and Preston counties, from Lake Lynn Lumber and Supply Co.; development to start in 1932; company has 500 acres of a 5000-acre tract of timber to work in Wharton township, Fayette county; when this is completed will move entire plant to vicinity of Pasgah.

Mining

N. C., Charlotte—United States Refining Smelting & Mining Co. has leased mine five miles from city; will develop for gold ore.

N. C., Tryon—Mimbres Valley Onyx Co., capital \$100,000, incorporated; M. I. Hartleson, M. B. Hendry.

Va., Norfolk—Tyler Sand Co., Inc., capital \$50,000, chartered; D. F. Tyler, 716 E. Charlotte St.

Miscellaneous Construction

Alabama—U. S. District Engr. Maj. R. A. Sharrer, Montgomery, investigating for proposed intracoastal canal from Pensacola Bay to Mobile Bay; \$600,000.

Fla., Miami Beach—W. H. McKenna, 1604 Drexel St., applied to U. S. Engineer for permission to construct timber wharf, Bay road and 52nd St.

Fla., Okeechobee—Maj. Gen. Lytle Brown, Ch. of Army Engrs., Washington, approved plan to construct levee along south shore of Lake Okeechobee to protect Everglades region. 6-4

Ga., Augusta—Hooper Construction Co., Bunnell, Fla., has contract for widening Augusta levee from locks near Sibley Mills to Sand Bar Ferry bridge below East Boundary; Claussen-Lawrence Construction Co., 1394 Gwinnett St., level sections between 14th and Fifth Sts.; including dyke above 14th St.; W. H. Wise, City Engr.

Louisiana—Bd. of State Engineers, 207 New Orleans Court Bldg., has following low bids: O. O. Odgen, Jr., 1474c per cu. yd., 60,000 cu. yd. drainage of borrow pits, Pontchartrain Levee Dist.; Acme Construction Co., 19.90c per cu. yd., 16,000 cu. yd. drainage of borrow pits and restoring wave wash, Lafourche Basin Levee Dist.; McWilliams Dredging Co., Canal Bank Bldg., 15.9c per cu. yd., 70,000 cu. yds., Ostrica to Machello Levee, Grand Prairies Levee Dist.; Midland Construction Co., 7.87c per cu. yd., Reid-Bedford Canal No. 2, Fifth Louisiana Levee Dist.; John E. Junkin, 7.8c per cu. yd., Glascock pit drainage; Midland Construction Co., 7.87c per cu. yd., Grinnell Lake-Bayou Roundaway Drainage Canal. 5-28

La., Alexandria—U. S. Engineers under direction of R. M. Bruce, Melville, making survey in connection with proposed levee along Red River.

La., Lake Charles—Bd. of Commrs., Lake Charles Harbor and Terminal District, let contract at \$444,000 to P. Olivier & Son, 114 Bilbo St., Lake Charles, for construction of wharf unit No. 3 and sheds Nos. 4 and 5; project includes 1600x201 ft. creosoted pile and timber wharf; 100 ft. of creosoted piling at front, retaining wall in rear; steel wharf sheds, 160x700 ft.; front apron 21 ft. wide, with two tracks and two depressed tracks; Elmer Shuttis, Engr., 921½ Ryan St., Lake Charles. 6-4

La., New Orleans—Bd. of Levee Commrs., Orleans Levee District, 606 Common St., opens bids July 21 for constructing 7102 ft. new levee on west bank of Mississippi River, Delacroix and Beka plantations, 10 miles below Morgan St. ferry landing; John Klorer, Ch. Engr.

La., Shreveport—War Dept., Capt. Geo. E. Lamb, Constructing Q. M., let contract to Ashton Glassell Co., 260 Cadillac St., for 5-ton incinerator, Barksdale Field. 6-18

Md., Claiborne—Claiborne-Annapolis Ferry Co., Annapolis, improve pier; erect waiting room with ticket office and roof over driveway.

Md., Curtis Bay, Baltimore—Following estimating on boat basin and gas engine shop for Coast Guard, P. C. Billard, Washington, D. C., bids due June 29: Century Construction Co.; Carl W. Schmidt, both Hearst Tower Bldg.; Avon Construction Co., 216 E. Lexington St.; W. E. Bickerton Construction Co., 515 Cathedral St.; Mullan Contracting Co., 3945 Greenmount Ave.; Maryland Metal Building Co., McComas and Race St.; Davis Iron Works, 301 President St.; J. J. Vesely, 522 Park Ave.; Frank Trazillo, 2030 Park Ave.; T. W. Watts, 12 W. Madison St.; Bertdrof Construction Co., Edgevale Rd.

Miss., Richton—Perry County Bd. of Suprs., C. W. Dearman, Clerk, opens bids July 6 for fill between slough bridge and river bridge on Wingate-Richton highway; 4000 cu. yds.

Missouri—U. S. Engineer Office, 1006 McCall Bldg., Memphis, Tenn., receives bids July 7 for 1,498,000 cu. yds. earthwork in Lower St. Francis Levee District; Item 22M, 94R, below Stewart, Mo., enlargement and false berm, length 12,086 ft., 335,000 cu. yd., height 16-23 ft.; Item 108, 108R, above Caruthersville, Mo., enlargement, length 7464 ft., 240,000 cu. yd., height 16-23 ft.; R111, 111R, Caruthersville, Mo., enlargement, length 2130 ft., 65,000 cu. yds., height 18-25 ft.; Item R112, 112R, Caruthersville, Mo., enlargement and new levee, length 1437 ft., 50,000 cu. yds., height 12-16 ft.; Item 113, 113R, Caruthersville, Mo., new levee and enlargement, length 5824 ft., 234,000 cu. yds., height 16-22 ft.; Item R151, 151R, below Barfield, Ark., enlargement and false berm, 13,114 ft., 574,000 cu. yd., height 25-31 ft.

Tenn., Memphis—U. S. Engineer, McCall Bldg., let contract for 650,000 lb. ½-in. galvanized wire strand at \$21,905 to Black Wire Rope Co., Peoria, Ill., for 750,000 lb. ¾-in. at \$22,875 to Pidgeon-Thomas Iron Co., 248 N. Second St., for 350,000 lb. 5/16 in. and ¼-in. at \$15,065 to Broderick & Bascom Rope Co., 805 N. Main St., St. Louis; Truscon Steel Co., Youngstown, Ohio, has contract for 150 tons forms, angle clips, and pins.

Tenn., Nashville—Carnegie Steel Co., Pittsburgh, reported, has contract for 300 tons sheet piling from U. S. Engineer Office; Ingalls Iron Works Co., 720 Fourth Ave., S., Birmingham, Ala., reported, has contract for 20 tons steel shapes for dam No. 1, Cumberland River.

Tex., Beaumont—Port Comsn. opens bids July 7 for wharf, deck and bulkhead improvements; Pier No. 4½, \$175,000; sheet piling, \$30,000; warehouse, 500 ft. long, \$48,000.

Tex., Houston—Harris County Houston Ship and Channel Navigation Dist., G. P. Simpson, Engr., care Port Comsn., has low bid of \$112,053 from Southwest L. E. Myers Co., Allen Bldg., Dallas, for repairs to and extension of Dock No. 11.

Tex., Houston—City, J. Russell Wait, Port Director, let contract at \$77,990, to J. S. Harrison Construction Co., 514 Liberty Natl. Bank Bldg., for construction of rein. conc. extension to city dock No. 10; 60 ft. wide, approx. 600 ft. long; Russ Mitchell, Inc., Petroleum Bldg., awarded contract at \$6463 for road to west end of wharf. 6-18

Tex., Marble Falls—Wm. J. Tucker, of State Game Dept., Austin, advises that no plans have been made for state fish hatchery at Marble Falls. 6-11

Tex., Port Arthur—City let contract to W. Horace Williams Co., Inc., 833 Howard Ave., New Orleans, La., for completing sea wall to cost over \$190,000; includes conc. slab for driveway along sea wall, Woolworth Blvd. to either Austin or Houston Ave., completing dirt work north and northwest of city, and erecting small pumping station northeast of Pearl Ridge.

Tex., Randolph Field—Constructing Q. M., Capt. Arthur W. Parker, opens bids June 30 for closed pipe pressure sprinkling system; 9000 ft. c. i. Class B bell and spigot pipe, 20,000 ft. laterals ranging 1½ to 3-in.; four ground storage tanks, conc., approximating 185,000 gal. capacity each; receive bids July 1 for one 65 g. p. m. and two 470 g. p. m. centrifugal pumps.

Va., Richmond—Doyle & Russell, Central Natl. Bank Bldg., Gen. Contr. on carillon tower, Byrd Park, of War Memorial Comsn., soon let contracts for foundation and museum portion; museum 80x100 ft., limestone; Carneal, Johnston & Wright, Archts., Electric Bldg. 5-14

W. Va., Huntington—U. S. Engineer Office, H. C. Corns, Ch., Engineering Section, making preliminary study for ice piers at or near Huntington; nothing definite developed as to location or type. 6-18

Miscellaneous Enterprises

Ala., Birmingham—Reed Brothers Stone Co., 3000 Eighth Ave., N., reported, rebuild burned plant.

Ala., Birmingham—Try-Me Bottling Co., Inc., purchased Try-Me Beverage Co., 2108 Fifth Ave., N.

Ala., Florence—Gardiner-Warring Co., Inc., J. T. Flagg, manufacturer of knit goods reported plans establishing department for manufacture of cardboard boxes for its own use; capacity 500 boxes.

Ala., Montgomery—Swift & Co., Union Stock Yards, Chicago, reported, plan erection of hog killing plant; capacity 4000 hogs weekly; to be in operation by September.

Ala., Montgomery—Protex Corp., incorporated; C. Henderson, 28 Madison Terrace; inventions.

Ark., Stuttgart—American Rice Growers Co-operative Assn., Box 242, Paul Daniels, Mgr., contemplates erecting rice mill and elevator; capacity 200,000 bu.; install cleaning, drying and elevator machinery; bids to be opened about July 20. 6-11

D. C., Washington—Department of Commerce, Bureau of Standards, George K. Burgess, Director, advises following have contract for centrifugal pumps for National Hydraulic Laboratory: Pump Unit No. 2, No. 3 and No. 7, Worthington Pump & Machinery Corp., Harrison, N. J.; No. 5, Warren Steam Pump Co., Warren, Mass.; No. 6, De Laval Steam Turbine Co., Trenton, N. J.; rejected bids on Pump Unit No. 4. 6-11

D. C., Washington—Witt & Mirman, 211 Seventh St., N. W., plans stores and sausage plant, 11th and E Sts., S. W.; 2-story and basement; 85x118 ft.; brick, steel and conc.; high pressure steam heat; electric wiring; two freight elevators; Maletico Con. Co., Contr., 805 Fifth St., N. W.

D. C., Washington—Dept. of Commerce, Bureau of Standard, George K. Burgess, Director, let contract at \$7600 to Shull Co., Conduit Rd. and Elliott St., for main switch-board and transformers for National Hydraulics Laboratory. 6-11

Fla., Clewiston—Reorganization plan completed for Southern Sugar Co., 919 N. Michigan Ave., Chicago, Ill., with plant here; plan includes issuance of \$7,250,000 new bonds and debentures and 545,000 shares of stock of new company to be known as United States Sugar Corp.

Fla., Coral Gables—Miraco Toys Manufacturing Co., incorporated; P. C. Taylor, Congress Bldg.

Fla., Hollywood—Hollywood Herald, Inc., chartered; R. Combs, L. W. Stetson.

Fla., Jacksonville—Automatic Mail Holder Co., incorporated; H. L. Sipe, 764 E. 56th St.

Fla., Miami—Laramore-Huster Roofing Co., incorporated; G. M. Thompson, Bank of Bay Biscayne Bldg.

Fla., Miami—Cocoon Products Co., W. C. Hill, Pres., Third National Bank, reported, plans establishing plant for production of cocoon pulp for use in food products; install crushing, grinding, conveying and other equipment; cost \$40,000. 6-11

Fla., Miami—Miami Beach Jockey Club, Inc., Joe M. Smoot, Pres., Twyman & McCarthy, Attorneys, Security Bldg., reported, expend \$2,000,000 for race track; Harold Hastings Mundy, Archt., 28 N. W. Eighth Ave.

Fla., Orlando—Orlando Advertising Co., incorporated; F. A. French, O. H. Myers.

Fla., Tampa—Celo County of America, Pierce and Polk Sts., advises at present time plans have not been completed for improving Bentley-Gray building recently acquired. 528

Ga., Atlanta—Woodward Ave. Dairy, 9 Woodward Ave., S. E., receiving bids for \$15,000 dairy; 1-story; conc. foundation; struc. steel; comp. roofing; Charles W. Bernhardt, 250 Hunnicutt St., N. W., and Stralton Hard, 289 Peachtree St., N. E., estimating. 6-4

Ga., Macon—Southern Tube Supply Co., incorporated; R. W. Jones, Stanislaus Circle.

Ky., Louisville—Kentucky Beverages, Inc., capital \$20,000, incorporated; A. C. Davis, 1260 Bassett St.

Ky., Mount Sterling—Mount Sterling Building Co., capital \$20,000, incorporated; J. E. Lawrence, John P. Cline.

La., New Orleans—Southern Animal Trap Co., Inc., F. J. Fortier, Vice-Pres.-Gen. Mgr., temporary address 138 S. White St., reported, has option on larger site for manufacture animal traps; install equipment for manufacture 40,000 traps daily.

Md., Baltimore—G. Gardner Francis Advertising Publications, chartered; G. Gardner Francis, 3204 Overland Ave.

Md., Baltimore—Bay Head Shore Co., incorporated; Gilbert I. Ford, 1016 Bonaparte Ave.

Md., Lonaconing—Sloan Brothers, reported, increase capacity of plant.

Miss., Gulfport—Stewart-Sneed-Hewes, Inc., 1414 25th Ave., capital \$50,000, chartered; Charles Henry Steward, John B. Sneed; insurance; acquired Hewes-Washington Co., Inc.

Miss., Jackson—Southern Live Stock Co., capital \$30,000, incorporated; C. E. Weyen, Terry.

Miss., Natchez—City, Lemuel P. Conner, Clerk, receives bids July 28 to furnish and install traffic lights. See Want Section Bids Asked.

Mo., Bethany—Harrison County Printing Co., capital \$15,000, incorporated; Garland Wilson, A. C. Flint.

Mo., Kansas City—Mi-Cleaners, Inc., chartered; A. A. Stewart, 3817 Wabash Ave.

Mo., Kansas City—Standard Brands, Inc., 1229 Montgall St., will expend \$50,000 for expansion of plant N. E. cor. 14th St. and Montgall Ave.; will provide larger offices and second floor garage; capacity 24 trucks and delivery cars, served by an outside ramp; soon let contract.

Mo., Kansas City—Rockhill Creamery Co., capital \$20,000, incorporated; A. L. Nesbitt, 4404 Fairmount St.

Mo., St. Louis—St. Louis Italian Baking Co., incorporated; Joe Mancusco, 825 Biddle St.

Mo., St. Louis—Doane Carton Co., reported, let contract to A. L. Rascher Construction Co., 4108 Clayton Rd., for factory addition, 912 N. Market St.; brick and conc.; 1-story and basement; 60x80 ft.; conc. foundation; Clymonts & Heinicke, Archt., 721 Wainwright Bldg.

Mo., St. Louis—Mo-Zel Chemical Products Co., chartered; Thomas J. Moss, Upper Lodge Road.

Mo., St. Louis—Elder Manufacturing Co., 7600 Michigan Ave., manufacture men's shirts and boys' wash suits, acquired manufacturing plant, Pennsylvania Ave. and Blow St.

Mo., St. Louis—Mississippi Valley Stockyards Co., capital \$20,000, incorporated; Henry W. Kiel, 1625 Missouri St.

Mo., St. Louis—Od Peacock-Sultan Co., 112 N. Second St., started constructing 4-story and basement building, 4500 Parkview Place; 40x125 ft. rein. conc.; W. C. Harting Construction Co., Gen. Contr., 722 Chestnut St.; Werner Hencke Plumbing Co., 2335 S. Grand St.; plumbing; Strong Heating Co., Chemical Bldg., heating; Kleneman Electric Co., 1420 Pine St., electric; Hollister-Whitney Co., Quincy, Ill., elevator; Clymonts & Heinicke, Archts. and Engrs. 6-18

Mo., University City—Book-Craft Publishers, Inc., incorporated; Carlyle Emery, N. Buren.

Mo., St. Louis—American Water Heater Co., 20 N. Wacker Drive, Chicago, Ill., reported, acquired business and assets of American Heater Corp., 1100 N. Sixth St., St. Louis; company is affiliated with Irwin Gas Combustion Co.; manufacturing operations will be continued at St. Louis plant under supervision of Harry C. Tabler, vice-president in charge of production.

N. C., Asheville—Swannanoa Laundry, Inc., capital \$100,000, chartered; Water M. Brown, 178 W. Chestnut St.

N. C., Charlotte—Interstate Granite Co., incorporated; John H. Small, Law Bldg.

N. C., Charlotte—Sugaw Creek Stone Co., capital \$50,000, incorporated; D. C. Dunn, 612 Granden Road.

N. C., Charlotte—Guy M. Beaty Roofing Co., capital \$50,000, incorporated; Guy M. Beaty, 1728 W. Trade St.

N. C., Charlotte—Greensboro Loom Reed Co., 412 Prescott St., Greensboro, George A. McFeters, Pres., reported, leased portion of Bostick Bldg. for Charlotte branch plant; manufacture reeds for weaving rayons and silk.

N. C., Fuquay Springs—Center Brick Warehouse, capital \$75,000, incorporated; W. B. Johnson, E. C. Fish.

N. C., Greenville—Star Tobacco Warehouse, reported, rebuild burned warehouse.

N. C., Gastonia—Piedmont Rabbit Farms, Inc., capital \$50,000, incorporated; R. O. Crawford, Gastonia; J. A. Lattimore, Shelby.

N. C., Greensboro—Cockfield Tent & Awning Co., capital \$50,000, incorporated; H. W. Cockfield, 216 N. Spring St.

N. C., High Point—Southern Garment Corp., Hobart M. Bryant, 1103 Clyde St.

N. C., Hickory—Catawba Boat Co., capital \$500,000, incorporated; E. A. Ivey, L. S. Ivey.

Tenn., Columbia—Livestock Industries, Inc., establishing stockyards at Cincinnati, Ohio, Glasgow, Hopkinsville and Morganfield, Ky., and plans depot.

Tennessee—Washington Manufacturing Co., Nashville, acquired plants of Allen Shirt Manufacturing Co. at Cookeville, Sparta and Fayetteville.

Tenn., Knoxville—G. W. Wallace, Jellico, and associates reported, plans plant to distill canal coal, producing creosote and probably coke.

Tenn., Knoxville—Retail Milk Producers' Assn., N. T. James and George T. Peters; plans issuing \$25,000 preferred stock; plans cooperative milk plant.

Tenn., Knoxville—Knoxville Mattress Co., Inc., capital \$15,000, chartered; George Hoyle, 213 Lovenia Ave.

Tenn., Nashville—Hutchison Engineering Works, 549 W. Washington St., Chicago, Ill., Lawrence Hutchison, Mgr., Nashville, has plant Mile End Ave. for manufacture four products invented by Mr. Hutchison; products include twelve-in-one tool; mechanical fork, for use in cafeterias, etc.; have installed 80 separate machines with individual motors; plan enlarging plant.

Tex., Dallas—L. E. Harris, 4408 Douglas St.; T. A. Griffin, N. Texas Bldg., and associates, considering establishment of amusement park on White Rock Lake.

Tex., Dallas—Gutherson Corp., South Dallas, reported, plans establishing plant at Love Field for production of Diesel aircraft motors, including parts and assembling. 4-16

Va., Exmore—People's Finance Insurance Corp., capital \$50,000, chartered; Charles M. Lankfort, Jr., Atty.

Va., Clarendon—Arlington Dairy Co. has plans for addition to building on Rucker Ave.

Va., Norfolk—Shirley Apartments, Inc., capital \$50,000, chartered; C. Q. Nugent, Law Bldg.

Va., Norfolk—Withers Printing Co., chartered; E. W. Withers, 749 Maury Ave.

Va., Richmond—Tobacco By-Products & Chemical Corp. let contract to Claiborne & Taylor, Inc., Broad Grace Arcade Bldg., for 2-story office and laboratory building, Delaware St., to replace present frame office building; brick and fireproof construction; will occupy an area 88x120 ft.; plans include space for research laboratories and plant working laboratories; shower baths, locker rooms, etc.; cost \$35,000; Lee Smith & Vandervoort, Archts., Sixth and Franklin Sts.

Va., Richmond—Nehi Mount Vernon Bottling Co., incorporated; Henry M. Fowler, Bond Bldg., Washington, D. C.

Va., Virginia Beach—Bickelhaupt, Inc., Amer' an Natl. Bank Bldg., Richmond, has contract for water and sewer improvements at State Military Reservation, Virginia State Rifle Range.

Va., Winchester—Victor Products Corp., Herbert H. Jennings, local plant manager, plans construction of two-story, brick and steel building, and installation of equipment at South Winchester plant; bids for erection of the new unit now being received; company manufactures rubber products.

Motor Bus Lines and Terminals

Ala., Montgomery—Mrs. Ruth Reed and Mrs. Helen B. Smith, operating Alabama Motor Freight Line, applied to Alabama Public Service Commission for permission to operate motor freight line between Montgomery and Atlanta, via Notasulga, Auburn, Opelika and Lanett.

Mo., Harrisonville—Crown Coach Co. filed application with Arkansas Railroad Commission, Little Rock, for permit to extend motor line from Joplin to Fort Smith, Ark.

Tenn., Memphis—Jadora Realty Co. will erect a bus terminal on Monroe Ave. between Second and Third Sts., to be occupied by Smith Motor Coaches and Dixie Greyhound buses; brick and stone exterior; interior of tile and marble; mezzanine floor; rest rooms; two stores; terminal of sufficient size to permit loading and unloading of eight buses at one time; cost \$34,000; Anker F. Hansen, Archt., Shrine Bldg.; Consolidated Contractors, Inc., 658 East St.; Fischer Heating and Pumping Co., 367 Adams St., and Standard Electrical Co., 591 Linden St., Contrs. 6-11

West Virginia—American Stages, Inc., Columbus, Ohio, applied to State Road Commission, Charleston, for permission to operate bus line in West Virginia along the Ohio and Kanawha rivers; provide bus service between Columbus, Huntington and Charleston and Huntington and Parkersburg.

W. Va., Bluefield—G. T. Leslie, Federal St., reported, interested in erection of central terminal for lines operating throughout this territory and operating from St. Louis, Washington, Columbus, Cincinnati, etc.; has building under option in block opposite West Virginian Hotel and fronting on Bland, Federal and Scott Sts.; will remodel; install waiting room, loading platform, 18-ft. driveway, in addition to restaurant; work to begin about July 1; tentative plans and survey under way.

Railways

Ky., Louisville—Kentucky & Indiana Terminal Railroad, E. P. Humphrey, V. P. and Gen. Counsel, authorized by Interstate Commerce Comsn., Washington, to procure an authentication and delivery of \$851,000 first mortgage 4½% bonds; reimbursement for capital expenditures.

Mo., Baltimore—Pennsylvania Railroad, W. W. Atterbury, Pres., Philadelphia, Pa., placed orders involving \$4,700,000 for construction of mechanical parts or chassis of 90 of 150 electric locomotives, for which \$16,000,000 electrical equipment was recently purchased; 54 to be built by Westinghouse Electric & Manufacturing Co., at Eddystone, Pa.; 25, by General Electric Co., at Erie, Pa.; 11, by Pennsylvania railroad shops at Altoona, Pa.; each locomotive to have one-piece cast steel main frame, to be built by General Steel Castings Corp. at Eddystone, Pa.; passenger locomotives 62-ft. 8-in. long and weigh 375,000 lbs. 6-4

Mo., Kansas City—Kansas City Public Service Co. replace nine blocks of street car tracks on Indiana Ave., 18th to 27th Sts.; considering replacement and repairs on 12th St., McGee St. to Broadway.

Mo., St. Louis—St. Louis-San Francisco Ry., F. G. Jonah, Ch. Engr., let contract to Reed & Lowe, Birmingham, Ala., for elevation of tracks at location of 4-track viaduct proposed over Southwest Avenue at Ivanhoe Ave.

West Virginia—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., authorized additional mine tracks to serve Pemberton Coal & Coke Co., Affinity, W. Va.

W. Va., Terry Junction—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., let contract to West Virginia Construction Co., First Huntington Natl. Bank Bldg., Huntington, for passing siding; \$50,000.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

ALABAMA—State Highway Comsn., Landon G. Smith, Director, Montgomery, receives bids June 30 for paving projects in following counties:

Macon—2.11 mi., near Tuskegee, F-201-B.
Marengo—3 mi., Demopolis-Moscow bridge, F-188-B1.

Montgomery—81 mi., Montgomery, S-497.

Ala., Huntsville—Madison County pave street through town of Gurley.

Ala., Montgomery—State Highway Comsn., Landon G. Smith, Director, receives bids July 1 for six months' maintenance supplies, including gravel, clay, creosoted lumber.

ARKANSAS—State Highway Comsn., Dwight H. Blackwood, Chmn., Little Rock, opens bids July 2 for 2 roads in following counties:

Phillips—2 mi. grading, draining, conc. paving, West Helena-Helena road, State Highway 20, Sec. 3, Job 11000, 5389 cu. yd. excavation, 24,785 sq. yd. pavement, 108,736 lb. rein. steel for pavement, 3308 lb. rein. steel;

Faulkner—13 mi. grading, draining, bituminous conc. surfacing, Palarm-Conway road, State Highway 65, Sec. 10, Job 678, 6628 cu. yd. excavation, 1279 cu. yd. gravel base course, 18,115 lb. rein. steel for structures; alternate of 12,000 tons bit. conc. base course mtl., 4608 tons bit. conc. surf. course mtl., modified Topeka type, 5973 cu. yd. Portland cement conc. curb, 291,057 lb. rein. steel for curb, or 17,000 tons bit. conc. base course mtl. and 5530 tons bit. conc. surf. or mtl., modified Topeka type.

Ark., Gurdon—City, Paving Dist. No. 1, completed survey, open bids about Aug. 1 for 1 mi. 6-in. rein. conc. paving, approx. 25,000 sq. yd., 24 to 60 ft.; curbing, earth excavation and sidewalk; F. A. Gerig, Engr., Arkadelphia.

Ark., Little Rock—Bd. of Commrs., Twelfth Street Road Improvement District, John D. Shackelford, Atty., soon let contracts for three bridges and three culverts on 12th St. pike.

D. C., Washington—District Commrs. received low bid of \$51,477 from Union Paving & Brod and Stiles Srs., Philadelphia, for paving conc. alleys; from E. B. Donaldson at \$42,836 for cement sidewalks.

Ga., Atlanta—State Highway Bd., J. W. Barnett, Chmn., to let construction contracts aggregating \$1,750,000 about July 15.

LOUISIANA—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, opens bids July 14 for 4 roads in addition to those previously announced, in following parishes:

Catahoula-Concordia—16.9 mi. conc. between Sicily Island and intersection of Routes 3 and 15;

Sabine—5.3 mi. conc. between Zwolle and Noble;

Iberville-Ascension—7 mi. grading, shell surfacing between St. Gabriel and Dutch-town;

Iberville—will not receive bids on 3.7 mi. gravel surfacing between Bayou Goula and Forrest Home as planned.

La., Crowley—City, Merrill Bernard, Engr., receive bids July 9 for paving.

La., Crowley—City Council adopted ordinances calling for bids for paving Eastern Ave. from curb to curb and allowing for a neutral ground, and paving Ave. F from curb to curb and laying curbs and gutters; all include paving outside 18 ft. being laid by State Highway Comsn.

La., Ferriday—City received low bid from Bon Flynn, Alexandria, at \$19,046, for street improvements.

La., New Orleans—Bd. of Levee Commrs., Orleans Levee District, 606 Common St., open bids July 21 for 7200 ft. gravel road on west bank of Mississippi River river front of Delacroix and Beka Plantations.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids June 30 for projects in following counties:

Caroline—4.83 mi. conc., Anderson to Delaware State line; Co-70-22, 238 and 218-B;

Baltimore City—58 mi. sheet asphalt, Walther Ave., Southern to Hamilton Ave.; BC-106-74;

Calvert—2.08 mi. gravel, Stokely to Weems Corner, C-48-84; 2.50 mi. gravel Frazier toward Patuxent River and from Solomon's Island Rd. toward Dowells, C-46-84.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, received low bids for projects in following counties:

Harford—1.52 mi. macad., Churchville-Dublin Rd., H-123-42, T. B. Gatch & Sons Contracting and Building Corp., 5937 Belair Rd., Baltimore, \$27,853;

Howard—stone masonry bridge extension, National Pike, west of St. Johns Lane, H-97-511, M. J. Grove Lime Co., Line Kiln, \$2793;

St. Mary's—2.27 mi. gravel, Newmarket-All Faith Church Rd., Sm-83-84, Jarboe & Houghton, Mechanicsville, \$31,207;

Worcester—7.62 mi. conc. shoulders, Berlin-Delaware state line road, Wo-101-111, Layfield & Waller Paving Co., Salisbury, \$25,042;

Baltimore—1.57 mi. conc., Falls Rd., B-197-44, Development & Construction Co., American Bldg., Baltimore, \$25,598;

Carroll—1.04 mi. conc., Hampstead toward Mexico, Cl-06-52, H. J. Williams Co., York, Pa., \$17,419;

Cecil—1.52 mi. conc., Fair Hill to Pennsylvania state line, Ce-110-24, Phillips & Brothers, Salisbury, \$29,780.

Md., Baltimore—City, Nathan L. Smith, Highways Engr., plans opening, widening and grading Loney's Lane, from 33 to 100 ft., from south side of Sinclair Lane to southwest side Erdman Ave.

Md., Easton—Mayor and City Council receive bids July 1 for 1500 sq. yds. conc. paving, South St.; Ralph A. Townsend, Town Clerk; E. G. Kastenhuber, Jr., Engr.

Md., Rockville—Montgomery County Commrs. plan widening and improvement of Montgomery Ave.; Berry E. Clark, Clerk.

Miss., Belzoni—Humphreys County Bd. of Supvrs., A. R. Hutchens, Clerk, opens bids July 6 for 25 cars washed gravel; delivery Cruger, for Road Dist. No. 4.

Miss., Gulfport—Harrison County Bd. of Supvrs., E. McManus, Clerk, opens bids July 6 for amiesite asphalt for period of one year.

Miss., Greenville—Bd. of Mississippi Levee Commrs. opens bids July 13 for 2.96 mi. gravel surfacing near Glen Allen; take separate bids same date for approx. 5000 tons gravel.

Miss., Jackson—State Highway Comsn., Chalmers M. Williamson, Director, receive bids July 1 for \$200,000 maintenance supplies for state highway department, July 26 to Jan. 25.

Miss., Yazoo City—Yazoo County Bd. of Supvrs. receive bids July 6 for hauling gravel in supervisors district No. 3.

Miss., Yazoo City—City rejected bids on \$150,000 paving work; McGowen & Williams, Engrs.

Mo., Cape Girardeau—City Council instructed E. L. Sailer, City Engr., to prepare plans for paving three blocks of S. Louisiana Ave.; also to establish grade line of Rock Drive, between Boulevard and N. Henderson Ave. to be paved with conc.

Mo., Clayton—St. Louis County, Roy Jablonsky, Highway Mgr., receives bids July 1 for improving Sacramento Ave., Avondale to Lawler Dr.; Oak St., from Ries Rd. east; Eatherton Rd., Wild Horse Rd. to Shephard Rd.; Baldwin Rd., Manchester Rd. to Keeler Cr. Rd.; Laclede Station Rd., Big Bend Rd. to Murdock Ave.; west side Jennings Station Rd., McLaren to Glennon property; Telegraph Rd., from north of Pottle Ave. to Christopher Dr.; Centaur Rd., west of Eatherton Rd. to Centaur Rd. C. R. I. & P. Crossing; Greenway Ave., Lincoln Ave. to west terminus.

Mo., St. Louis—City received following low bids from Asphalt Paving Co., 1323 Sublette St.; experimental roadway, Watson Rd., \$15,532; asphalt surfacing; Emma Ave., Mimica Ave. to Goodfellow Blvd., \$17,503; Lexington Ave. Vandeventer to Clay Ave., \$18,100; Wyoming St., Broadway to Ninth St., \$10,012; Wyoming St., Ninth to 13th St., \$8170.

Mo., St. Joseph—Land Construction Co., Corby Bldg., low bidder on resurfacing Noyes Blvd., 28th St. to north entrance of Bartlett Park; 31st and Renick Sts.

N. C., Greensboro—City, Harvey Kennedy, City Clk., opens bids June 30 for 25,000 sq. yd. surface treatment to gravel streets.

Oklahoma—State Highway Comsn., Sam Hawks, Chmn., Oklahoma City, has following low bids: U. S. Highway 64, cut-off, between Haskell and Tulsa county pavement in Muskogee county, J. J. Harrison Co., Holdenville, \$47,869; bridge on same route, Moran and Buckner, Muskogee, \$15,152; bridge on U. S. Highway 64 in Sequoyah county, 3 mi. southeast of Vian, R. R. Tway, \$7698; 12 mi. grading, U. S. Highway 70, southeast from Madill, Shannon and Abbott, Stillwater; bridge on same route, Ledford and Way, Walters, \$31,899; 10 mi. grading and bridges, State Highway 9, between Mangum and Granite, Dan Sweeney, Oklahoma City; building 4000 ft. rails, overhead crossing near Fitzhugh in Pontotoc County, Osborn Co., Oklahoma City.

Okl., Arnett—Ellis County voted \$1,000,000 bonds for roads; grade, drain, gravel and oil treat 111 mi. roads.

SOUTH CAROLINA—State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, opens bids July 7 for 5 roads (bituminous surfacing) and bridge, involving approx. \$750,000, in following counties:

Pickens—7.4 mi., Route 14, end of present bituminous surfacing north of Pickens to North Carolina line and 11.5 mi., Route 183, point 1 mi. west of Pickens to Oconee County line;

Horry—11.3 mi., Route 9, intersection of Route 17 near Nichols to Route 40, Green Sea; 23.7 mi., Route 40, from Route 38 north of Conway via Bayboro and Green Sea to state line; 14 mi., Route 49, end of present pavement, Myrtle Beach to Route 9 near Little River;

Chester—125-ft. rein. conc. bridge over Rocky Creek, Route 9, near Chester.

SOUTH CAROLINA—State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, received low bids for projects in following counties:

Anderson—13 mi. grading, Route 29, Anderson to Alford, C. M. Lyle Construction Co., Gainesville, Ga., \$54,742.

Cherokee—8 mi. grading, Route 5, Blacksburg to Smyrna, A. S. Barron, Lancaster, \$35,006.

Union-Cherokee—12.5 mi. grading, Route 11, between Jonesville and present paving south of Gaffney, Spartanburg Contracting Co., Spartanburg, \$57,416.

Chester—8 mi. grading, Route 5, from Nitrolee to Fort Lawn, Spartanburg Contracting Co., \$48,301.

Saluda-Newberry—6 mi. approaches to Saluda River bridge, Route 392, at Chappells, K. V. Johnson, Edgefield, \$15,000.

SOUTH CAROLINA—State Highway Comsn., Ben M. Sawyer, Ch. Commr., received low bids for projects in following counties:

Chester—9.267 mi. topsoil, Route 5, Great Falls to Fort Lawn, Spartanburg Contracting Co., Spartanburg, \$48,301.

Clarendon-Florence—21.257 mi. grading, Route 4, Alcolu to Olanta, Newell Contracting Co., Greenville, \$78,971.

Colleton-Hampton—11.609 mi. sand-clay, Route 63, Islandton to Varnville, also approaches to Little Salkehatchie River, Hooper Construction Co., Bunnell, Fla., \$67,534.

Lexington—8.616 mi. sand-clay, Route 6, between Lexington, Edmund, Spurs A & B, Newell Contracting Co., Greenville, \$30,960.

Alken—21.591 mi. sand-clay, Routes 215 and 4, near Alken to Orangeburg county line, Newell Contracting Co., \$103,393.

Saluda-Newberry—602 mi. approaches to Saluda River Bridge, Chappells, Route 392, K. V. Johnson, Edgefield, \$15,000.

Cherokee—8.075 mi. grading, Route 5, Blacksburg to Smyrna, A. S. Barron, Lancaster, \$35,006.

Union-Cherokee—12.129 mi. grading, Route 11, Jonesville to south of Gaffney, Spartanburg Contracting Co., \$57,416.

Anderson—13 mi. grading, Anderson to Alford Bridge, C. M. Lyle Construction Co., Gainesville, Ga., \$54,742.

Marlboro-Darlington—10.902 mi. Route 30, Bennettsville to near Society Hall, Gibson Construction Co., Walterboro, \$36,220.

Florence—13.801 mi. grading, Route 4, near Effington to Olanta, Boyle Road & Bridge Co., Sumter, \$71,201; 17.397 mi. grading, Route 51, near Florence to Pamlico, Boyle Road & Bridge Co., \$102,463; 17.78 mi. grading, Route 51, Pamlico to near Pee Dee River and Route 175, Johnsonville to Pee Dee River, Newell Contracting Co., \$885,763.

Bamberg—9.581 mi. Route 64, Ehrhardt to near Olar, Gibson Construction Co., \$60,614.

Marion—17.829 mi. grading. Route 175, south of Marion to Great Pee Dee River, Boyle Road & Bridge Co., \$115,516.

Pickens—18.28 mi. cement conc., Route 14, Pickens to North Carolina state line, bids rejected.

Tenn., Chattanooga—County Judge Will Cummings plans recommending that State Dept. of Highways and Public Works, Nashville, expend \$900,000 on roads in Hamilton county, including the Ringgold, Dayton, Birmingham, Harrison, Anderson, Will Cummings, Signal Mountain and Silverdale roads.

Tenn., Chattanooga—City grade and oil streets in paving districts recently created.

Tex., Cuero—State Highway Comsn., Gibb Gilchrist, Engr., Austin, plans road work, Cuero to Yoakum, Highway 72.

Tenn., Maryville—City, J. L. Vineyard, Street Commr., receives bids June 30 for paving streets with emulsified asphalt.

Tenn., Nashville—Gov. Henry H. Horton recommend issuance of \$27,000,000 bonds for roads and bridges.

Tex., Fort Worth—City, O. E. Carr, Mgr., let contract at \$13,572 to West Texas Construction Co., 501 E. Rosedale St., for paving underpass under M. K. T. tracks, connecting S. Main with Morningside; 900 ft. long, 43 ft. wide; vertical fibre brick on 6-in. conc. base.

Tex., Houston—W. W. Jackson, Chmn., Citizens Committee, asking improvement of Lyons Ave., Deepwater to Griggs; 2½ mi.; J. M. Nagle, Engr.

Tex., Fredericksburg—Gillespie County Commrs. Court soon start work on Highway St. Pecan Belt Highway.

Tex., Marlin—Falls County Commrs. Court call election July 11 in New Salem Road District No. 7 on \$12,000 bonds for roads.

Tex., Refugio—City, J. O. West, Mayor, plans voting on bonds for permanent paving.

Tex., San Antonio—City, James Simpson, Clerk, has low bid of \$9198 from Colglazier & Hoff, 125 Crosby St., for 2-in. topping Fredericksburg Road Extension, N. Flores St. to San Pedro Ave.

Va., Norfolk—Planning Comsn., Director of Public Works, W. H. Taylor, III, Chmn., considering widening to not less than 100 ft. Water St., east of Commercial Place.

Va., Richmond—City plans widening Main St., between Eighth and 18th Sts.; \$30,000.

Va., Richmond—City, R. Keith Compton, Director of Public Works, probably widen Hull St., between 12th and 14th Sts.

W. Va., Charleston—Kanawha County Court, J. C. Blackwood, Pres., plans grading project on Little Sandy Creek.

Contracts Awarded

Ark., Harrison—State Highway Comsn., Little Rock, let contract to Interstate Construction Co., First National Bank Bldg., Fort Smith, for asphalt surface on 10-mi. Highway 65; Eureka Springs-Springfield road to junction of Highways 65 and 62; F. P. Kirk, Dist. Hwy. Engr.

D. C., Washington—Georgia Quincy Granite Co., 353 Elm St., Macon, Ga., has contract for granite curbing.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, let contracts for projects in following counties:

Anne Arundel—2.13 mi. conc., Annapolis Blvd., AA-112-72, Aiello Construction Co., Gough and Dean Sts., \$40,347.

Calvert—2.4 mi. gravel, Berth to Cove Point, C-27-82, Pembroke & Gasporovic, Park Hall, \$16,737.

Worcester—7.62 mi. conc. shoulders, Berlin-Delaware state line road, Wo-101-111, Phillips Brothers, Salisbury, \$23,072.

Miss., Holly Springs—Marshall County Bd. of Supvrs. let contract at \$26,342 to A. J. Brown Contracting Co., Jasper, Ala., for grading and graveling Red Banks bonded road; S. W. McCleskey, Engr., 63 S. Third St., Memphis, Tenn.

Mo., Kansas City—City Commrs., C. E. Peterson, City Engr., let contract for repairing pavement, Kansas Ave. to Wyandotte Railways Co., at \$138,000.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Huntsville—City constructing sewer system; cost \$25,000; W. S. Dickey Clay Mfg. Co., 2131 28th Ave., N., Birmingham, has clay pipe contract; G. W. Jones, City Engr.

Ala., Montgomery—A. H. Dimijian has contract for sanitary sewer, Adeline, Mill, Belmont, Holt and Clinton streets.

Fla., Miami Beach—Robt. G. Lassiter & Co., S. W. 27th Ave., Miami, reported, has contract for construction of storm sewers in connection with road they are constructing in development at N. Miami Beach, at Bakers Haulover, for Ocean Beach Heights Co.; Chas. G. Hancock, Engr., 12th Floor Court House, Miami.

Ky., Louisville—Comms. of Sewerage, Matt H. Crawford, Chmn., opens bids June 26 for Peachtree St. District submains. See Want Section—Bids Asked.

Ky., Winchester—City, J. M. Walker, City Engr., plans constructing storm sewers; cost \$50,000; expending \$100,000 for sanitary sewers.

Md., Baltimore—Board of Awards receives bids July 1 for sewers, Sanitary Contract 283.

Md., Easton—McGuire & Michie, Durham, N. C., has contract for storm water drains; E. G. Kastenhuber, Jr., Town Engr. 6-11

Mo., Washington—City, reported, has surveys complete; soon take bids for sewer system; cost \$30,000; W. B. Rollins & Co., Engr., 339 Railway Exchange Bldg., Kansas City.

S. C., Greenville—City, reported, soon begin work on installation of sewers in Parker, Augusta Rd. and Northgate Heights districts; \$220,000 bonds available. 3-26

Tex., Mineral Wells—J. S. Murphy & Co. has contract for additions to sewer system at Camp Wolters.

Va., Langley Field, Hampton—Lakewood-Manor Construction Co., Newport News, reported, low bidder at \$16,700 for two sewage pumping plants and cast iron force main, heavier than air section, Langley Field. 5-28

Va., Quantico—Curtis Brothers, 6736 State Rd., Philadelphia, have contract at \$33,497 for roads, shoulders and curbs, water drain and sewer lines, marine barracks. 6-18

Telephone Systems

Fla., Orlando—Eastern Air Transport, Inc., 225 Broadway, N. Y., reported, plans establishing airplane radio telephone service; construction of station to begin at once; install necessary equipment; also plans establishing plant at Miami and Jacksonville; F. E. Gray, Radio Engr.; E. C. Nilson, Municipal Aviation Director.

Miss., Logtown—Logtown Utility Co., incorporated; Arthur E. Marshall, J. Roland Weston.

Tex., Sugarland—Harris Fort Bend Telephone Co., chartered; G. D. Ulrich, Lee Curtis.

Tex., Waxahachie—Dixie Radio Corp. of Chicago, acquired building at Milford, will install radio factory; plant includes number of brick buildings and 14 acres of land.

Textile Mills

Ga., Austell—Clark Thread Co., Newark, N. J., reported, let contract to Forster Machine Co., Westfield, Mass., for winding and doubling equipment for 40,000 spindle mill; includes 56 doublers, high speed cone winders for doubling and cone winders for dyeing package tube winding.

Ga., McDonough—Newton Coal & Lumber Co., Griffin, erecting building 50x100 ft.; brick and steel, for McDonough Hosiery Mills, Inc. 6-18

N. C., Concord—Willis Hosiery Co., reported, acquired Brancord Mill; plans expansion.

N. C., Gastonia—Textiles, Inc., A. G. Myers, Pres., Citizens Bank Bldg., organized new mercerizing and finishing enterprise to be known as Hampton Textiles, Inc.; Hampton Textiles, Inc., will be owned jointly by Hampton Co., East Hampton, Mass., and Textiles, Inc.; A. G. Myers states Hampton Textiles, Inc., represents an affiliation of interests which in a large, modern plant located in Gaston County will be used for manufactured and finished yarn, and other materials for textile trade; plant will operate under supervision of executives of Hampton Co. and Textiles, Inc.; remodel old plant known as Priscilla Mills; install new mercerizing and finishing machinery; Hampton Textiles, Inc., capital \$500,000, incorporated; Thos. McConnell, R. B. King, Northampton; A. G. Byers, J. H. Separk, J. L. Gray, A. K. Winget, C. G. Armstrong, R. C. Rankin, Gastonia. 6-18

Tenn., Chattanooga—Richmond Spinning Mills, reported, installing additional equipment in its East Lake plant.

Tenn., McMinnville—Welwood-Crossville Silk Throwsters, Inc., John C. Welwood, Jr., Pres., organized to do commission throwing of silk and rayon; start plant operations Aug. 1; 20,000 spindles; affiliated with John C. Welwood, Corp., broad silk and ribbon manufacturer, with throwing plant at McMinnville, and weaving plants at Winchester and Sparta.

Va., Covington—Industrial Rayon Co., Hiram S. Rivitz, Pres. and Gen. Mgr., Cleveland, Ohio, with rayon manufacturing plant in Covington, reported, ordered 120 circular knitted underwear fabric knitting machines from Wildman Manufacturing Co., Norristown, Pa.; reported, establish plant at Cleveland, O.

Va., Lynchburg—Plant and properties of the Alta Vista Cotton Mills, reported, acquired by creditors.

Va., Lynchburg—Virginia Textile Corp., subsidiary of Dundee Textile Corp., Pascale, N. J., reported, considering erection of new unit adjoining present 1-story plant; no immediate expansion planned; large portion of manufacturing now being done in New Jersey will probably be moved to Lynchburg.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ala., Maxwell Field, Montgomery—Constructing Q. M. Capt. M. A. McFadden, opens bids July 17 for 300,000-gal. steel tank on 100-ft. tower.

Ark., Glenwood—City plans water works supply; E. T. Archer & Co., Engr., 609 New England Bldg., Kansas City, Mo.

Ark., Murfreesboro—City, C. A. Rankin, Mayor, plans water works system; E. T. Archer & Co., Engr., 609 New England Bldg., Kansas City, Mo.

D. C., Washington—Munz Spralawn Corp., 7-223 General Motors Bldg., Detroit, Mich., has contract at \$31,690 for underground lawn sprinkler system, U. S. Capitol.

Fla., Lake City—J. J. Nolan & Co., 235 Court St., Memphis, low bidder at \$25,748 for water supply system, U. S. Veterans' Bureau; rein conc.; hollow tile; cast stone; steel sash; built-up roof. 6-18

Fla., Ormond—Stanley C. Carnell has contract at \$18,910 for water main under the Halifax River to supply the Beach zone with city water; specifications call for 10-in. c. i. main, built in 12-ft. lengths buried 3 ft. under river bed, on solid foundation; constructed to allow for expansion and contraction.

Ky., Paris—Bd. of Commrs., Boone Baldwin, City Managing Agent, let contract to Clark, Stewart & Wood, Lexington, for construction of conc. dam across Stoner Creek; for improving and repairing filtration and pumping plant; Higgins Construction Co., Charlotte, N. C., has contract for work on pumping plant and settling basin.

Ky., Shelbyville—Kentucky Utilities Co., Louisville, constructing 35-acre lake adjoining the company's plant on Clear Creek; rock and conc. reservoir; 16-in. main now being installed from pumping station to lake.

Md., Baltimore—Board of Awards, reported, plans revising specifications for two cone valves for Prettyboy Dam. 6-11

Md., Laurel—Commrs. of District of Columbia, Washington, received low bid of \$13,290 from Layne Atlantic Co., Seaboard Air Line Rwy. Bldg., Norfolk, Va., for drilling well and furnishing pumping equipment at District Reformatory.

Mo., Houston—City, reported, plans voting on bonds for water works improvements.

Okla., Tulsa—City, Mayor George Watkins, start work by end of summer on construction of second reservoir at Mohawk Park; \$100,000.

Tex., Arp—Town, D. D. Alexander, Mayor, plans installing water system.

Tex., Camp Hulen, Palacios—U. S. Property and Disbursing Office, Camp Mabry, received low bid from Southern Engine & Pump Co., Houston for water supply system completion. 6-11

Tex., Houston—City, reported, receive low bid at \$30,211 from Southern Engine & Pump Co., 615 Washington St., for water well at South End plant in Herman Park; J. A. Sauls, Water Works Engr.

Va., Virginia Beach—Ivan A. Brickelhaupt, Windsor Farms, Richmond, has contract at \$19,168 for water and sewer systems and erection of bath buildings, State Rifle Range.

Woodworking Plants

Ala., Gadsden—Queen City Furniture Co., First Ave. between 11th and 12th Sts., rebuilding burned plant. 6-18
N. C., Marion—McDowell Furniture Co., Inc., R. B. Crisp, erecting 40-ft. addition to dry kiln; also construct 116-ft. addition to connect machine and finishing rooms; increase capacity 25 per cent.

FIRE DAMAGE

Ala., Anniston—Lynchburg Foundry Co.'s finishing department shed; loss \$10,000.
Ala., Huntsville—Lyric Theater; loss \$80,000.
Ark., El Dorado—50,000-gal. tank of Gulf Oil Co.; loss \$60,000.
Ark., Eudora—Crystal Theater owned by J. R. Crabtree; loss \$15,000.
Ga., Albany—Plant of D. Brown Guano Co.; loss \$500,000; building owned by J. H. Carpenter of New York.
Ga., Loganville—Cash Hardware Store operated by Robert Moore; T. W. Henderson's garage; hardware store of W. T. Brooks & Son; Big Rock warehouse occupied by Highway Dept.; W. T. Brooks' storage house.
Ga., Macon—Hotel Lanier owned by T. W. Hooks; loss \$100,000.
Ga., Valdosta—Planing mill plant and 1,000,000 ft. of dressed lumber of J. N. Bray Co.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Mo., St. Louis—Moolah Temple, Judge John W. Calhoun, Chmn., Bldg. Comm., 3523 Longfellow Blvd., considers remodeling and enlarging temple, 3821 Lindell Blvd.; two 24-ft. extensions on third floor; \$100,000; probably select archt. at June 28 meeting.
Va., Norfolk—American Legion Post No. 35, Mahood P. Hardy, Commdr., 1120 Redgate Ave., plans 4 cottages, 8½ Stop, Wilmoughby, as funds become available.

Bank and Office

Ala., Huntsville — E. L. Love, Archt., drawing plans to remodel Struve Building.
D. C., Takoma Park, Washington—General Conference of Seventh-Day Adventists, W. H. Williams, Asst. Treas., erect \$30,000 addition to office building.
Mo., Kansas City—Kansas City Public Service Co., H. W. Smith, 15th and Grand Sts., make interior alterations to building, Eighth and Delaware Sts.; 8 stories, 100x100 ft.; no date set for bids; linoleum floors; steel sash and trim; gypsum and hollow tile; wire glass; wood and steel partitions; R. N. Wakefield, Archt., 15th and Grand Sts. 4-9
Tex., Palestine—Theo. S. Maffitt, Archt., drawing plans for 1 or 2 additional stories to Link Bldg., Oak, Sycamore and Crawford Sts., for doctors' offices and laboratories.

Churches

Ala., Tarrant, Birmingham—First M. E. Church erect brick veneer Sunday school; 2 stories, 37x62 ft., comp. roof; Bem Price, Archt., 1420 Comer Bldg., Birmingham.
Ark., Weiner—St. Francis R. C. Church erect \$10,000 brick veneer bldg.; 1 story, 30x75 ft., comp. roof, misc. iron and steel; Henry Kramer, Archt., Goodwyn Inst. Bldg., Memphis, Tenn.
Md., Joppa—Trinity Lutheran Church, Rev. Ed Austin, Pastor, has low bids at \$9987 each from Ralph Simmers, 4547 Harford Rd., and C. W. Littleton & Sons, 4313 Liberty Heights Ave., for building; Chas. G. Sack, Archt., 4621 Harford Ave. 6-4
Okla., Oklahoma City—Northwest Baptist Church, Rev. G. Lemuel Hall, Pastor, considers erecting \$20,000 brick Sunday school.
Okla., Quinton—Methodist Church, Rev. J. E. Snell, Pastor, erect \$15,000 brick bldg.; 1 story and basement; Haralson & Nelson, Archts., Merchants Natl. Bk. Bldg., Fort Smith, Ark.; soon ready for bids.

Ky., Louisville—Roofing plant of Mutual Service Co., 435 E. Burnett Ave.; loss \$15,000.

Miss., Natchez—Residence of R. Lee Parker, Jr., 4 miles from Natchez.
Miss., West Point—Sanitary Laundry; loss \$15,000.

Mo., St. Joseph—St. Joseph Sporting Goods Store, 418 Felix St.; loss \$10,000.

N. C., Greenville—Warehouse of Star Tobacco Warehouse Co.; loss \$100,000; building owned by Smith and Sugg Co.

N. C., Greensboro—John V. Fox's residence near Greensboro; loss \$10,000.

N. C., Thomasville—R. C. Ritchie's residence, Morton St.

N. C., Wilmington—Mrs. Sarah G. Kenan's residence, 1705 Market St.

Tex., Brackettville — Mrs. Elsie Sauer's ranch house, Spofford Highway No. 131, 3 miles from Brackettville.

Tex., Normanna—Catholic Church; address The Pastor.

Tex., Pilot Point—Pilot Point flour mill property of George Light; loss \$35,000.

Tex., Plainview—E. D. Taylor's cafe; Bank of Plainview; additional bldg.; loss \$10,000.

Va., Norfolk—Storage building of H. M. Jacobs & Co., fuel and feed dealers, 2915 Deep Creek Blvd.

Va., Rosslyn—Garage of Murphy & Ames Lumber Co.; loss \$25,000.

W. Va., Parkersburg — Parkersburg Clay Products Co.'s engine room and equipment; loss \$50,000.

W. Va., Shinnston—Robert M. Boone's dry-goods store; loss \$10,000.

Dwellings

Ala., Birmingham—W. W. French, Jr., 1315 S. 31st St., erect painted brick veneer residence, Mountain Brook; 2 stories and basement, 34x39 ft., comp. roof, hot air heat; Denham & Denham, Archts., 1220 Comer Bldg.

D. C., Washington—J. J. James, 1226 14th St., N. W., has permit for 10 brick dwellings, 300 Nicholson St., N. W., and 5606-30 Third St., N. W.; 2 stories; total \$80,000.

D. C., Washington—Wm. S. Minnly has permit for 4 brick, tile and stucco dwellings, 3721-25-29-33-37 Massachusetts Ave., N. W., and 3105 38th St., N. W.; 2 stories; total \$66,000.

Fla., Fort Lauderdale—J. Wesley Pape, care Volite Products Co., 317 Sycamore St., Cincinnati, O., will have bids received July 1 by R. C. Stokell, Box 1731, Ft. Lauderdale, for \$60,000 residence, garages, etc.; Francis L. Abreu, Archt., Perry Bldg., Brunswick, Ga.; following reported, estimating: Gunn & Coll, Inc., 69 N. E. 36th St.; Sandquist Construction Co., S. W. 27th Ave.; R. G. Witters Co., 1745 S. W. Sixth St.; J. Y. Gooch & Co., Bedford Bldg., N. E. First St.; G. Henry Hunt, Inc., 1636 S. W. Ninth St.; John B. Orr, Inc., 147 N. E. Sixth St.; all Miami; DaCamara-Chace Co.; Benj. F. Hoffman, 12 Via Mizner, both Palm Beach, Fla.; Butchart & Lawrence; Mills & Norton; Hart & Johnson; Geo. Young, all Fort Lauderdale. 5-21

Fla., Hollywood—Arthur Spiegel erect 2-story residence and garage, Hollywood Blvd.; Fred A. Eskridge, Archt., First Natl. Bk. Bldg.; bids in.

Fla., Miami Beach—Louis Morse erect residence and 2-car garage, Michigan Ave. and Collins Canal, Palm View Sub-division; rein. conc., conc. block and stucco, 2 stories, 4 baths, wood piles and conc. slabs, steel sash, tile roof, orna. iron, cast stone, elect. refrigerator; John & Coulton Skinner, Archts., French Village, LeJeune Rd., Coral Gables; drawing plans.

Fla., Miami Beach—Jerome A. Turrell, Newton, Mass., plans winter residence, Nautilus sub-division.

Fla., St. Petersburg—F. C. Williams, 6 E. Fourth St., Cincinnati, O., plan to remodel and enlarge dwelling, 510 Park St., North; add wing and additional story to front of dwelling; may improve yacht basin.

La., New Orleans—Stanford J. Levy, 3336 Louisiana Ave. Pkwy., erect residence, Versailles Blvd. near Fontainebleau Drive; ready for bids in about 20 days.

Md., Baltimore—Davison Realty Co., subsidiary, Davison Chemical Co., John O. Benson, in charge, receiving bids, due July 1, for 8 dwellings in connection with development; plans by office of Joseph Evans Sperry, Calvert Bldg.; English Colonial type, 16 ft. center to center; brick or stucco, steel sash, hardwood floors, built-up shingle and metal roof, hot water; probably unit heating and refrigeration; estimators lately noted. 6-18

Md., Easton—J. Ramsey Speer, Henry P. Turner, John P. Stafford develop "Waverly"; erect residences.

Mo., St. Louis—Koch & Hauptfleisch, 5535 Grace St., erect \$10,000 brick dwelling, 5852 Itaska St.; 2 stories, 28x39 ft., slate roof, hot water heat; A. Stauder, Archt.

Okla., Bartlesville—H. V. Foster erect \$75,000 residence; brick and stone, 2 and 3 stories; Keene & Simpson, Archts., 1005 Land Bank Bldg., Kansas City, Mo.

S. C., Aiken—Mrs. Lloyd Richards erect brick veneer residence; 2 stories and basement, wood joist floor constr.; E. Lynn Drummond, Archt., 2306 Central Ave., Augusta, Ga.; plans about ready.

S. C., Ritter—Arthur H. Caspary, 60 Broadway, New York, has low bid at about \$93,000 from Anderson & Steifel Construction Co., Aiken, S. C., for residence, garage, servants' quarters, laundry, power house, etc., Ashpoo River near Ritter; Willis Irvin, Archt., S. F. C. Bldg., Augusta, Ga. 5-21

Tenn., Lookout Mountain—G. F. Meehan, care Ross-Meehan Foundry, Carter St., Chattanooga, erect \$85,000 residence; Clarence T. Jones, Archt., James Bldg., Chattanooga.

Tex., Pearsall—Claude McCauley, Director, City Central Bank & Trust Co., San Antonio, advises does not plan summer residence. 6-18

Tex., San Antonio—Berta George, care Phil Lloyd Shoop, Archt., Western Natl. Bldg., erect English type residence; brick veneer, rein. conc. foundation, 1 and 2 stories, 38x63 ft., 11 rooms, 3 baths, wood, tile, linoleum and slate floors, comp. roof, Sheet-rock and Textone interior; plans ready about June 25.

City and County

Ark., Camden—City, G. R. Haynie, Mayor, considers remodeling and enlarging city hall; new vault.

Ark., Dewitt—Arkansas County voted \$55,000 courthouse bonds.

La., New Orleans—City Comsn. Council has low bid at \$30,844 from J. M. DeFraitres, for Ninth St. Market; Sam Stone, Jr., & Co., Archts., Masonic Temple Bldg. 6-4

Mo., Webster Groves, St. Louis—Webster Groves Bd. of Aldermen, Maurice A. Mudd, City Clk., votes June 30 on \$100,000 city hall bonds; stone and brick, 2 stories and basement, about 80x100 ft.; police dept. and jail; Chas. L. Thurston, Archt., 111 W. Lockwood St., Webster Groves.

Okla., Pawnee—Pawnee County Bd. of Commrs. appointed court house building committee; \$90,000 now available.

Tex., San Antonio—Bexar County erect \$65,000 juvenile home, Bexar County Farm; brick and stucco, wood roof trusses, 1 and 2 stories, about 72x125 ft., cement and mastic tile floors, rein. conc. foundation, clay tile roof; Harvey P. Smith, Archt., 312 Natl. Bank of Commerce Bldg.; W. E. Simpson Co., Engr., 946 Milam Bldg.; plans being drawn. 5-28

W. Va., Clarksburg — Harrison County Court, Maurice L. Loudon, Clk., have plans out for bids by July 15 for \$700,000 court house; fireproof, 110x130 ft., 6 stories; Walker & Weeks, Archts., 11001 Euclid Ave., Cleveland, O.; Carlston C. Wood, Asso. Archt., Lowndes Bldg., Clarksburg. 5-21

Va., Westhampton—Mrs. C. R. Haskell, Westhampton, erect residence; Bascom J. Rowlett, Archt., Richmond Trust Bldg., Richmond.

Government and State

Ark., Pine Bluff — Arkansas National Guard, Adjt.-Gen. E. L. Compere, Little Rock, plans to start work July 1 on \$25,000 armory; Durward F. Kyle, Archt., National Bldg., Pine Bluff. 4-9

D. C., Washington—Navy Dept., Bureau of Yards and Docks, has low bid at \$246,666 from Worsham Bros., Knoxville, Tenn., for barracks and boiler plant, Naval Air Station, Anacostia. 6-4

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$415,900 from Robert E. McKee, 1916 Texas St., El Paso, for post office and court house remodeling and extension; low bid at \$37,181 from American Elevator & Machine Co., 500 E. Main St., Louisville, Ky., for elevator. 6-11

D. C., Washington—Architect of The Capitol, David Lynn, has low bid at \$11,234 from Warner Service Co., 102 W. Clinch Ave., Knoxville, Tenn., for electric equipment in Library of Congress.

D. C., Bolling Field, Anacostia—Constructing Quartermaster ready for bids for 1-story, 110x220 ft., brick, hollow tile and conc. motion picture theater and gymnasium building; steam heat.

Ga., Fort Benning—Following contractors have plans for \$75,000 medical detachment barracks, bids received July 9: Murphey Pound, Hill Bldg.; Williams Lumber Co., Inc., 13th St.; J. P. Bradfield, all Columbus; Rogers & Leventhal, Inc., 822 E. 11th St.; Algernon Blair, First Natl. Bank Bldg.; Samford Brothers, Inc., 301 Washington Ave., both Montgomery, Ala.; Grahm Construction Co., Red Rock Bldg.; George A. Clayton Co., Norwood Griffin Co., both Bona Allen Bldg.; Wm. P. Francis, 201 Luckie St., N. W., all Atlanta; Batson-Cook Co., West Point, Ga.; Jas. C. Miller Co., Campbellsville, Ky.; V. L. Nicholson Co., 102 W. Clinch Ave.; Worsham Brothers, Empire Bldg., both Knoxville, Tenn.; G. A. Hanson Co., Inc., 215 Madison St., Tampa, Fla.; Gallivan Construction Co., Gallivan Bldg., Greenville, S. C.; Duke & McCullers, Live Oak, Fla.; J. N. Bryan & Son, Rogers Bldg., Raleigh, N. C.; Smallman-MacQueen Construction Co., 1109 Fifth Ave., S., Birmingham, Ala. 6-18

Ga., Monroe—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., opens bids July 7 for \$53,000 post office; 1 story and basement, rein. conc., struc. steel, brick and tile, composition roof.

Ga., Waynesboro—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., opens bids July 7 for \$53,000 post office; 1 story and basement, rein. conc., struc. steel, brick and tile, comp. roof.

Ky., Falmouth—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids in duplicate July 9 for post office, etc.; drawings from office Supvg. Archt. 12-4-30

Ky., Prestonsburg—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., opens bids July 7 for post office. 12-11

La., Camp Beauregard, Alexandria—U. S. Property and Disbursing Office for Louisiana, 43 Jackson Barracks, New Orleans, opens bids July 3 for pumping equipment and pump house.

La., Shreveport—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$303,848 from Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala., for post office remodeling and extension; low bid at \$8531 from S. Heller Elevator Co., Milwaukee, Wis., for elevator. 6-11

Md., Fort George G. Meade—Constructing Quartermaster has low bid from John M. Kiser & Bro. Lumber Co., 208 Norfolk Ave., Fairmont, W. Va., for 40x24 ft., brick garage and ramp with slate roof at ambulance hospital. 6-11

Missouri—State Highway Comsn., T. H. Cutler, Ch. Engr., State Highway Bldg., Jefferson City, plans 30 maintenance bldgs. throughout State; \$5000 each, 1 story, 41x76 ft., masonry and steel; soon call for bids on steel.

Mo., Lamar—Prospective estimators on \$70,000 post office, bids July 1 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Earl E. Garber & Co., 203 W. Fourth St., Bethlehem, Pa.; Plains Construction Co., Pampa, Tex.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Rosen & Fischel, Inc., 11 S. LaSalle St.; Geo. Thompson & Son Co., 30 N. LaSalle St., both Chicago, Ill.; Hiram Lloyd Building & Construction Co., Synd.

Trust Bldg.; Kenton Construction Co., Wainwright Bldg.; Geo. Griffiths Construction Co., Arcade Bldg., all St. Louis, Mo.; Kellogg & Anderson, Sedalia, Mo.; W. R. McCormack Construction Co., Joplin, Mo.; McMillen & Shelton, Masonic Bldg., Enid, Okla.; T. H. Johnson, North Texas Bldg., Dallas, Tex.; W. D. Lovell, 1415 Eighth St.; Phelps-Drake Co., Inc., Metropolitan Life Bldg., both Minneapolis, Minn.; Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala.; Chas. H. Barnes, 312½ Fifth St., Logansport, Ind.; Geo. W. Stiles Co., 664 N. Michigan Ave., Chicago; Wickes Engineering & Construction Co., 1441 Bluff St., Des Moines, Iowa; John V. Grogan, Junction City, Kan.; H. J. Gilbertson Construction Co., Farnsworth Bldg., Memphis, Tenn.; B. S. Staley & Sons, 214 E. Jackson St., Centerville, Iowa; Gurthier & Co., Topeka, Kan. 6-11

Mo., Sikeston—State Highway Comsn., T. H. Cutler, Ch. Engr., State Highway Bldg., Jefferson City, erect \$70,000 office bldg. and garage; brick and rein. conc., 2 stories and basement, 52x42 ft.; garage section 1 story, 90x67 ft.; bids in.

Mo., Unionville—Prospective estimators on post office, etc., bids July 1 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Earl E. Garber & Co., 203 W. Fourth St., Bethlehem, Pa.; Plains Construction Co., Pampa, Tex.; McMillen & Shelton, Masonic Bldg., Enid, Okla.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala.; Kellogg & Anderson, Sedalia, Mo.; Rosen & Fischel, Inc., 11 S. LaSalle St.; Geo. Thompson & Son Co., 30 N. LaSalle St.; Geo. W. Stiles Co., 664 N. Michigan Ave.; Jas. McHugh & Son, Inc., 840 W. 70th St., all Chicago, Ill.; Fred R. Comb Co., 2113 Chicago Ave.; W. D. Lovell, 1415 Eighth St.; Phelps-Drake Co., Inc., Metropolitan Life Bldg., all Minneapolis, Minn.; Hiram Lloyd Building & Construction Co., Synd. Trust Bldg.; Kenton Construction Co., Wainwright Bldg.; Geo. Griffiths Construction Co., Arcade Bldg., all St. Louis, Mo.; John V. Grogan, Junction City, Kan.; Wickes Engineering & Construction Co., 1441 Bluff St., Des Moines, Iowa; T. H. Johnson, North Texas Bldg., Dallas, Tex.; Chas. H. Barnes, 312½ Fifth St., Logansport, Ind.; Joe McCarthy & Sons, Spartan Bldg., Pana, Ill.; E. S. Staley & Sons, 214 E. Jackson St., Centerville, Iowa; Max Mildenstein, Cedar Rapids, Iowa; S. M. Wilson & Co., Medical Bldg., Granite City, Ill.; R. Butke, 527 Paxton Block, Omaha, Neb. 6-11 under Miss., Unionville

Tenn., Huntingdon—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids in duplicate July 9 for post office, etc.; drawings from office Supvg. Archt.

Tex., Atlanta—Prospective estimators on post office, etc., bids July 1 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Plains Construction Co., Pampa, Tex.; Earl E. Garber & Co., 203 W. Fourth St., Bethlehem, Pa.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; W. B. Smith, Box 1701-E, El Dorado, Ark.; Kellogg & Anderson, Sedalia, Mo.; Chas. H. Barnes, 213½ Fifth St., Logansport, Ind.; Algernon Blair, First Natl. Bk. Bldg.; Samford Bros., Inc., 301 Washington Ave., both Montgomery, Ala.; McMillen & Shelton, Enid, Okla.; T. H. Johnson, North Texas Bldg.; Thomas & Yarbrough, S. W. Life Bldg.; Nathan Wohlfeld, Construction Bldg., all Dallas, Tex.; W. D. Lovell, 1415 Eighth St., Minneapolis, Minn.; H. W. Underhill Construction Co., 233 N. Waco Ave., Wichita, Kan.; Geo. Griffiths Construction Co., Arcade Bldg., St. Louis, Mo.; Plains Construction Co., Box 1298, Pampa, Tex. 6-11

Tex., Austin—State Bd. of Control, Claude D. Teer, Chmn., has \$33,580 appropriation to remodel and repair old Travis County court house.

Tex., Fort Worth—Additional prospective estimators on \$1,240,000 post office, bids July 2 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; General Constr.—Fleisher Engineering & Construction Co., Wrigley Bldg.; Strandberg Bros. Co., Transportation Bldg., both Chicago, Ill.; S. & W. Construction Co., Memphis, Tenn.; Wm. MacDonald Construction Co.; Humes-Deal Co., 1218 Olive St., both St. Louis, Mo.; R. E. Campbell, 105 W. Sixth St., Los Angeles, Calif.; Fred Martin Co., 720 S. Sixth St.; Fred R. Comb Co., 2113 Chicago Ave.; Phelps-Drake Co., Inc., Metropolitan Life Bldg.; Libbey & Libbey Co., 244 Second Ave., South; National Contracting Co., 2114 Foshay Tower, all Minneapolis, Minn.; Buckeye Construction Co., Norwood, O.; Jas. T. Taylor, Aviation Bldg.; Harry B. Friedman; R. F. Ball Construction Co., Elect. Bldg. Annex, all Fort Worth; Lloyd E. Mitchell; English Construction Co., both Washington; R. F. Farnsworth

& Co., Inc., New Orleans, La.; C. L. Shaw, 767 S. Lamar St., Dallas, Tex.; S. M. Siesel Co., 160 Ogden Ave., Milwaukee, Wis.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Elevators—Warsaw Elevator Co., 227 Fulton St., New York; A. B. See Elevator Co., 1343 H St., N. W.; Haughton Elevator & Machine Co., 1103 Vermont Ave.; Otis Elevator Co., 810 18th St., N. W., all Washington; Atlantic Elevator Co., Erie Ave. and D St.; Westinghouse Electric Elevator Co., 30th and Walnut Sts., Philadelphia, Pa.; General Electric Co., Schenectady, N. Y.; R. G. Wilfond, Box 510, Raleigh, N. C.; American Elevator & Machine Co., 509 E. Main St., Louisville, Ky.; Kimball Bros. Co., Ninth St. and 11th Ave., Council Bluffs, Iowa; Shepard Elevator Co., 2413 Colerain Ave., Cleveland, O. 6-18

Tex., Tyler—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., soon call for bids for site for \$360,000 post office; J. B. Miller, Postmaster.

Tex., Waco—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation to erect \$40,000 dormitory, State Home for Dependent and Neglected Children.

Va., Langley Field, Hampton—Constructing Quartermaster, Fort Monroe, Va., opens bids July 16 for service club for non-commissioned officers; information on application.

Va., Fort Myer—Constructing Quartermaster, Room 2336, Munitions Bldg., Washington, D. C., has low bid at \$86,900 from Brooklyn & Queens Screen Manufacturing Co., Inc., 17 Williams Ave., Brooklyn, N. Y., for 4 double company officers' quarters with garages, and at \$82,470 from same firm for 6 double non-commissioned officers' quarters with garages. 5-21

Va., Manassas—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids in duplicate July 8 for post office, etc.; \$60,000; drawings from office Supvg. Archt.

Va., West Point—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids in duplicate July 8 for post office, etc.; \$65,000; drawings from office Supvg. Archt.

Hospitals, Sanitoriums, Etc.

Ala., Birmingham—Children's Hospital, S. 30th St. and Avenue G, Jas. W. Donally, Chmn., 2933 Avenue G, remodel bldg. after plans by Miller & Martin, Archts., 911 Title Guar. Bldg.; \$25,000; bids in.

Ark., Arkadelphia—Drs. N. R. and C. K. Townsend soon let contract for hospital, Caddo St., to replace burned structure.

Ark., Pea Ridge—Dr. J. C. Propp started work on foundation for \$12,000 to \$15,000 hospital; cobblestone veneer, 1 story, 28x70 ft., with 30x30-ft. wing; operating room.

D. C., Washington—Department of Interior, Jos. M. Dixon, First Asst. Sec., 6117 Interior Bldg., has plans ready for 4-story, brick, stone trim, struc. steel and conc. continuous treatment buildings, kitchen and dining hall for St. Elizabeth's Hospital; \$825,000; plans by Constr. Div. U. S. Veterans Bureau, Room 764, Arlington Bldg.

Ga., Augusta—United States Veterans Bureau, Room 764, Arlington Bldg., Washington, D. C., receives bids until July 14 for officers' duplex quarters Nos. 32 and 33, including walks, grading and drainage, U. S. Veterans Hospital; work includes excavating, conc. work, floor tile, slate and metal roofing, roof ventilators, metal lathing, plastering, carpentry, insect screens, window shades, painting, glazing, hardware, outside service connections, etc.; drawings from Constr. Div., Room 764, Arlington Bldg.

La., New Orleans—Charity Hospital, Fred W. Matthews, Sec.-Treas., Board of Administrators, receives bids June 30 for \$25,000 refrigerating and ice manufacturing plant; includes vertical single acting double cylinder ammonia compressor; double ammonia receiver; high pressure connections, piping, freezing tank.

Okla., Supply—State Bd. of Public Affairs, W. C. Hughes, Chmn., Oklahoma City, select architect about July 1 for \$85,000 power plant and \$125,000 hospital bldg., Western Oklahoma Hospital.

Okla., Vinita—State Bd. of Public Affairs, W. C. Hughes, Chmn., Oklahoma City, select architect about July 1 for \$125,000 hospital bldg., Eastern Oklahoma Hospital for Insane.

Tex., Abilene—State Board of Control, Claude D. Teer, Chmn., receives new bids June 29 for men's dormitory, Abilene State Hospital; 2 stories, 150x42 ft., brick, struc. clay tile, struc. steel, stone and rein. conc., metal lath and plaster, tar and gravel roof; David S. Castle Co., Archt., Alexander Bldg. 6-18

Tex., Austin—State Bd. of Control, Claude D. Teer, Chmn., has appropriation to erect \$40,000 convalescent dormitory wing, \$18,000 for repair and fireproofing of dormitory and \$25,000 each for repairs and fireproofing of 2 bldgs., all Austin State Hospital for Insane.

Tex., Dallas—Gov. Ross Sterling, Austin, signed bill appropriating \$39,500 for power house unit for proposed Dallas State Hospital for psychopathic, cancer and pellagra cases; amount to be available in second year of 2-yr. period; project to be handled by State Bd. of Control, Austin. 4-23

Tex., Harlingen—Dr. Hugh L. Rains, Okmulgee, Okla., and others may erect hospital.

Tex., Rusk—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation to erect \$35,000 employees' dormitory and install \$40,000 water supply system, Rusk State Hospital; \$85,000 to be available for hospital or ward bldg. during second year of 2-yr. period.

Tex., Sanatorium—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation to erect \$90,000 dormitory, Tuberculosis Sanatorium.

Tex., Terrell—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation to erect \$85,000 ward bldg., Terrell State Hospital.

Tex., Wichita Falls—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation to erect \$90,000 hospital bldg., Wichita Falls State Hospital; \$105,000 to be available during second year of 2-year period for ward building.

Virginia—Tidewater Victory Tuberculosis Memorial Hospital Assn., Mrs. A. E. Ewell, Pres., Lynnhaven, plans to start work in Nov. on Tidewater Victory Memorial Hospital, to serve 5 counties; location not determined. 1-23-30

Va., Richmond—Grace Hospital let contract to James Fox & Sons for 4-story and basement annex, 401 W. Grace St.; brick, steel and conc., 51x44x55 ft., fireproof; operating rooms, laboratories; \$52,000, exclusive of equipment; Baskerville & Lambert, Archts., Central Natl. Bank Bldg. 8-14

Hotels and Apartments

Fla., St. Cloud—Richardson & Odum leased Lake View Hotel; recondition and improve.

Mo., St. Louis—Premium Investment Co., Sidney R. Baer, Grand Leader, 6th and Washington Sts., rebuild hotel damaged by fire.

Mo., Warsaw—O. D. Groom and W. E. Krumrei, Bristow, Okla., reported, erect \$150,000, 6-story hotel to be named "Del Rio La Casca"; Hawk & Parr, Archts., First Natl. Bank Bldg., Oklahoma City.

Okla., Oklahoma City—Thos. L. Sorey, Perine Bldg., preparing plans for remodeling hotel annex, 14 N. Broadway into auto hotel for Marquand Huckins; brick, 9 stories.

Tex., Gilmer—Chamber of Commerce promoting erection of hotel.

Tex., Gladewater—Chamber of Commerce, L. M. Hewitt, Sec., promoting erection of \$100,000, 140-room hotel.

Tex., Troup—Chamber of Commerce, Max A. Jarvis, Sec., promoting erection of 40- to 50-room hotel.

Miscellaneous

Fla., Fort Myers—Chamber of Commerce promoting erection of \$12,000 to \$25,000 recreation center; plans call for clubhouse with lounge, dining room, kitchen, card rooms, showers, locker room and other club facilities; 16 individual cabanas; each to consist of combination living and sleeping rooms, dressing room, shower.

Fla., Miami—Miami Beach Jockey Club Inc., Joe M. Smoot, Pres., selected Harold Hastings Mundy, 28 N. W. 8th Ave., Miami, as designing and supervising architect for \$2,000,000 racing track; Twyman & McCarthy, Attyrs., Security Bldg.; Mr. Smoot was formerly Pres. of Hialeah Park Track which was sold to Joseph E. Widener, Maj. Barclay Warburton and associates.

Fla., West Palm Beach—Railway Express Agency, Inc., E. A. Murphy, Supt. of Bldgs., 325 Mitchell St., S. W., Atlanta, erect one-story, 59x35 ft. express building; brick and shingle veneered walls; bids in.

Miss., Columbia—Lampton Co. erect \$12,000, 2-story, 44x55 ft., brick veneer funeral home; Juan G. Landry, Archt., 207-09 Conn Bldg., Hattiesburg; bids in.

N. C., Smithfield—Smithfield Woman's Club, Mrs. T. J. Lassiter, Pres., plans clubhouse on N. Second St.

Va., Yorktown—Yorktown Sesquicentennial Assn., A. R. Rogers, Dir., erect grandstand to seat 30,000 people; U-shape; 40 tiers of bleachers.

Railways Stations, Sheds, Etc.

W. Va., Huntington—Chesapeake & Ohio Rwy. Co., C. W. Johns, Ch. Engr., Richmond, Va., erect warehouse; bids in about June 29. See Want Section—Building Material and Equipment.

Schools

Ala., Auburn—Pi Kappa Alpha Fraternity, J. E. Jenkins, Chmn., soon ready for bids for two-story and basement, brick fraternity house; comp. roof; \$35,000; Warren, Knight & Davis, Archts., 700 Protective Life Bldg., Birmingham.

Ark., Clarksville—Clarksville Special School Dist., A. Bost, Pres., School Bd., ready for bids by July 1 for \$25,000, 2-story and basement, brick grammar school; Haralson & Nelson, Archts., Merchants Natl. Bank Bldg., Fort Smith.

Ark., Conway—Arkansas State Teachers' College, H. L. McAllister, Pres., having plans prepared by Wittenburg & Deloney, Southern Bldg., Little Rock, for repairs to present building and additional building.

Ark., Jonesboro—Agricultural and Mechanical College, R. Whitaker, Pres., Bd. of Trustees, receives bids July 14 for 4-story, rein. conc. and brick, fireproof administration building; conc. and tile and built-up tar and gravel roof, cast stone, dumb waiters, elevators, conc., linoleum, terrazzo and tile floors, incinerator, limestone, marble, metal doors, gypsum, hollow and interior tile, terra cotta trim, \$200,000, equipment, \$100,000; plans at office Estes W. Mann, Cotton Exchange Bldg., Memphis, Tenn., and Pettey & McAninch, Inc., Pyramid Bldg., Little Rock, Archts. 6-4

Ark., Nashville—Nashville Special School Dist., care J. H. Dodson, Howard County Supt. of Education, plans \$45,000, 2-story, brick and conc. high school; plans by State Dept. of Education, C. M. Hirst, Statehouse, Little Rock.

Fla., Hollywood—Riverside Military Academy, Sandy Beaver, Pres., Gainesville, Ga., leased Hollywood Hills Inn and Hills School; expend \$100,000 to transform into barracks and classrooms; provide residences for faculty, naval unit drill ground, athletic field, etc.

Fla., Tallahassee—State Bd. of Control, P. K. Yonge, Chmn., El Verano Hotel, West Palm Beach, receives bids July 10 for \$50,000 training school for A. & M. College for Negroes; plans and specifications at office Rudolph Weaver, Archt., 204 Peabody Hall, Gainesville. 6-18

Ga., Lake Park—Lowndes County Bd. of Education, E. H. Beck, Supt., erect brick high school; may vote on bonds soon.

Ky., Mayfield—Graves County School Bd. receives bids July 1 for additions to schools at Pilot Oak, Clear Springs and J. B. Harde-man School; \$10,000. 6-11

Ky., Owensboro—Davies County Bd. of Education, J. W. Snyder, Supt., receives bids June 27 for high school.

Ky., Stanley—Bd. of Education, J. W. Snyder, Supt., plans 2-story, brick veneer, 8-room school.

La., Kentwood—Tangipahoa Parish School Bd., C. C. Pittman, Supt., called election July 28 on \$110,000 bonds in First Ward for senior high school at Kentwood.

La., New Orleans—Loyola University, Father S. J. Hynes, Pres., plans establishing Pan-American Dept. at University; tentative plan includes museum; ultimate expenditure reported to cost between \$5,000,000 and \$10,000,000.

Md., Annapolis—Anne Arundel County Public School Comsn., George Fox, Sec.-Treas., receives bids June 30 at office Bd. of Education, Hotel Maryland, for brick high school for colored and frame addition to German-town School; plans at office Buckler & Fen-hagen, Archts., 325 N. Charles St., Baltimore, and office Supt. of Schools; following contractors estimating: Chas. L. Stockhausen, 33 S. Gay St.; C. W. Littleton, 4313 Liberty Heights Ave.; C. L. Kern, 612 McCabe Ave.; Century Construction Co., 434 Heart Tower; Lacchi Construction Co., Munsey Bldg.; North-Eastern Construction Co., 6 W. Madison St.; Ralph MacMurray, 39th and Old York Road; Frank Marine, 2 E. Lexington St.; Frairie Bros., 19 W. Franklin St.; Julius A. Kinlein, American Bldg., all Baltimore; Ira L. Wales, Glyndon; Hastings & Parsons, Salisbury; Carlson & Carlson; Bean Bros.; Samuel B. Dove; Clarence Williams;

Elmer Parkinson; Maurice E. Meade, all Annapolis; Goode Const. Co., 11 E. Fifth St., Charlotte, N. C.; estimating on Germantown job only; Sidney McCall, 3404 Marmon Ave., Baltimore. 6-11

Md., Annapolis—Anne Arundel County School Commrs., George Fox, Sec.-Treas., soon ready for bids for 2-story, brick, fireproof, 4-room grade school at Jacobsville; W. H. Emory, Jr., Baltimore Trust Bldg., and Buckler & Fenhagen, 325 N. Charles St., both Baltimore, Asso. Archts. 6-11

Md., Baltimore—Bd. of Awards, City Hall, receives bids July 8 for \$90,000 addition to School No. 34, Washington Blvd. and Carey St.; Carl F. Strohmeier, Archt., Calvert Bldg.; H. G. Perring, Struc. Engr., Court Square Bldg.; James Posey, Mech. Engr., Baltimore Trust Bldg. 6-4

Md., Brooklyn, Baltimore—Bd. of Awards, City Hall, has low bid at \$62,360 from Chas. L. Stockhausen, Inc., 33 S. Gay St., for 2-story, brick school; Geo. R. Callis, Archt., 13 Melvin Ave., Catonsville; James Posey, Mech. Engr., Baltimore Trust Bldg.; Van Rensselaer Saxe, Struc. Engr., 217 N. Calvert St. 6-11

Md., Baltimore—School Commrs., Bureau of Maintenance, J. C. Siegel, 1230 E. 20th St., have following low bids for school repairs: Contr. E-21-31, plumbing School No. 13, \$5966, George H. Schaffer, 4017 Falls Rd.; Contr. E-44-31, plumbing and heating School No. 54, \$3322, Jos. P. Foster & Sons, 224 N. Greene St.; Contr. E-42-41, 2 fire escapes School No. 221, 1673, T. W. Watts, 12 E. Madison St.; Contr. E-49-31, millwork, School No. 54, \$3094, Baltimore Lumber Co., 1123 E. Baltimore St.

Md., Cambridge—High School Building Comsn. of Dorchester County, M. Warren Hooper, Chmn., receives bids June 30 for schools at Vienna, Hurlock, Cambridge and Crapo; plans at office James H. Noble, County Supt. of Schools; Linthicum & Linthicum, Archts., Raleigh, N. C.

Md., Frederick—Maryland State School for Deaf, Ignatius Bjorlee, plans improvements, including general repairs, fireproof stairways and prob. additional fireproofing of portions of present buildings; James S. Mussear, Jr., Archt., 9 E. Pleasant St., Baltimore; bids in June 28.

Miss., Laurel—Myrick Consolidated School Dist. votes June 30 on \$10,000 bonds for erecting, repairing and equipping school; address Jones County School Bd. 5-21

Miss., Poplarville—Bd. of Trustees, Pearl River College, A. B. Nicholson, Sec., Courthouse, receives bids July 7 for removing present metal shingle roof and sheet metal work and reroofing with shale tiles, Spanish design, with all sheet metal work of copper on building; E. C. Hearon & Son, 311 Carter Bldg., Hattiesburg; following contractors estimating: Clifford F. Favrot Supply Co., 2530 Perdido St., New Orleans, La.; Hamilton Brothers & Rice, Gulfport; Burkett Sheet Metal Works, 111 Newman St., and Hattiesburg Sheet Metal Works, Green St., both Hattiesburg; Clark-Morgan Roofing Co., Inc., 440 S. Parish St., Jackson; Trenton Lumber Co., Poplarville.

Mo., Branson—Branson Consolidated School Dist. voted \$20,000 bonds for one- and two-story, 55x100 ft., 2-story and basement, brick and rein. conc., semi-fireproof high school; wood floors, comp. roof, cast stone, hardwood floors, built-up flat roof; Heckenlively & Mark, Archts.-Engrs., 504 Landers Bldg., Springfield. 6-18

Mo., Columbia—Kappa Alpha Fraternity, University of Missouri, soon let contract for alterations to fraternity house; 3 stories and basement, brick, stone and stucco; Buckley & Van Brunt, Archts., 823 Gloyd Bldg., Kansas City.

Mo., Eldon—Bd. of Education, Henry Rae, Clk., has low bid at \$31,195 from B. O. Short, Pierce City, for 2-story and basement, 77x115 ft., brick, stone trim junior high and grade school; comp. roof; T. W. Bast, Archt., Kahn Bldg., Sedalia. 5-28

Mo., St. Louis—McKenzie School Dist. No. 47, Wm. Potthast, Pres., has low bid at \$37,442 from Fendler Contracting Co., Oakland Ave., for 2-story and basement, 92x85 ft., brick and rein. conc., fireproof school in St. Louis County; 4 classrooms, cafeteria, comp. built-up roof, vapor heat, stone trim; Reiff & Falkner, Archts., 101 Southwest Bank Bldg. 5-28

N. C., Taylorsville—Alexander County School Bd. receives bids June 29 for \$30,000, one-story and basement, brick veneer Wittenburg School; Q. E. Herman, Archt., Hickory; following contractors estimating: L. S. Costner, Cherryville; Herman-Sipe Co., Conover; R. M. Bumgarner; H. C. Cline; Elliott Building Co., all Hickory; Tucker & Sikes, Monroe; Barger Bros., Mooresville; Ervin-West Construction Co., Statesville.

Okla., Boise City—Bd. of Education, Consolidated Dist., having plans prepared by C. F. Ward, Clayton, New Mexico, for school building.

Okla., Shawnee—School Bd. plans 8-room unit to Jefferson Ward school; also grade school in Beverly Hills addition and improvements to other buildings; \$48,000.

Okla., Stafford—Bd. of Education erect \$30,000, one-story brick school; The Butler Co., Archt., Insurance Bldg., Oklahoma City.

S. C., Columbia—State Sinking Fund Comsn. authorized loan of \$40,000 to University of South Carolina and \$22,000 to Citadel for completion of construction of new buildings.

S. C., Rock Hill—Following contractors estimating on \$35,000, 2-story and basement, brick and tile addition to dining hall, bids July 2 by Winthrop College, Dr. Jas. P. Kinard, Pres.; J. J. McDevitt Co., Builders Bldg., Charlotte, N. C.; J. C. Heslep Construction Co., Carolina Bank Bldg.; Lupo & Holcombe, both Columbia; Morris-McKoy Building Co., Finley Bldg., Greenville; C. A. Morrison & Son, Shelby, N. C.; Carolina Construction Co., 500 Walker Bldg., Greenville, S. C.; E. F. Hettrick, Norris Bldg., Atlanta, Ga.; Littleton Construction Co., Charlotte, N. C.; Sellers Holding Co., Inc., Columbia; J. Gray Martin, Clinton; J. H. Healan, Rock Hill; Edwards & Sayward, Archts., Marietta Bldg., Atlanta, Ga. 6-18

Tenn., Knoxville—Knox County School Bd., W. W. Morris, Supt., selected W. A. Rutherford, Jr., to prepare plans for \$16,000, 4-classroom and auditorium school to serve Hardin Valley, Graybeal and Stony Point communities and \$11,000, 4-classroom and auditorium school for Ball Camp and Chestnut Grove communities; selected Manley & Young, Medical Arts Bldg., to prepare plans for \$11,000 school at Inskip; having plans prepared by Barber & McMurry, General Bldg., for \$30,000 addition to Young's High School.

Tex., Austin—University of Texas, J. W. Calhoun, Comptroller, having plans prepared by Herbert M. Greene, LaRoche & Dahl, Construction Bldg., Dallas, for following building program: Geology building, \$300,000; architecture building, \$300,000; physics building, \$450,000; men's dormitory, \$200,000; library, \$1,000,000; union group including student activities building, cafeteria and lunchroom, small auditorium, \$750,000; home economics building, \$350,000; all structures brick, struc. clay tile, struc. steel, stone and rein. conc.; Paul P. Cret, Consit. Archt., 112 S. 16th St., Philadelphia, Pa. 5-21

Tex., Austin—State Bd. of Control, Claude D. Teer, Chmn., has appropriation of \$25,000 for 30-bed hospital at Deaf, Dumb and Blind Institute for Colored.

Tex., College Station—Texas A. & M. College Bd. of Directors authorized erection of \$350,000 chemistry building and \$200,000 agricultural engineering building; plans being prepared by Dr. F. E. Giesecke, College Archt. 5-7

Tex., Galveston—Bd. of School Trustees, Eugene Jackson, Sec., ready for bids about July 16 for \$210,000, 2-story, rein. conc. and tile, West End District Elementary School; D. N. McKenzie, 2107½ E. St., Galveston, and Mark Lemon, Construction Bldg., Dallas, Asso. Archts.

Tex., Gatesville—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation of \$30,000 for negro boys' dormitory and \$12,500 for ice house and bakery at State Juvenile Training School.

Tex., Gainesville—State Bd. of Control, Claude D. Teer, Chmn., Austin, has appropriation of \$5000 to erect gymnasium and \$20,000 for additional floor to dormitory at Girls' Training School.

Tex., Austin—State Bd. of Control, Claude D. Teer, Chmn., has appropriation of \$50,000 for dormitory at Austin State School for Feeble-minded.

Va., Oceana—Atlantic University, Dr. Wm. Mosely Brown, Pres., Virginia Beach, reported, acquired 75-acre site west of Oceana between Norfolk and Virginia Beach for permanent location of University; plans one or more brick buildings within next few months. 1-1

Va., University—Alumni Assn. of University of Virginia, Frank L. Fuller, Pres., Durham, N. C., plans library as memorial to late Dr. Edwin Anderson Alderman.

Stores

D. C., Washington—Morris Wittlin, 5630 16th St., N. W., and Samuel M. Deckelbaum erect 2-story, rein. conc. and brick stores, 500-6 K St., N. W., and 924-26 Fifth St., N. W.; A. S. J. Atkinson, Archt., 3801 Macomb St., N. W.

D. C., Washington—Louis Mazza, 3500 Connecticut Ave., N. W., erect one-story, 25x100 ft., brick store, 2614 Connecticut Ave.; slag roof, steam heat; J. E. W. Sohl, Archt., 1336 New York Ave.; contractors estimating; Robert J. O'Neill, 1720 Twentieth St., N. W.; McInerney, 923 Fifteenth St., N. W.; H. Herferth, Jr., 1406 G St.

Ga., Atlanta—Butler Brothers, Rand and Canal Sts., Chicago, Ill., leased 4 stores, 169, 171, 173 and 175 S. Pryor St., and remodel; Atlanta branch to be in charge of Harry Gordon and D. F. Khars, Jr.

La., Plaquemine—Following contractors estimating on \$19,000, one-story, and mezzanine store for F. J. D'Albor Furniture Co., bids July 2: G. L. Whitaker & Son, Plaquemine; H. P. Pylant, 934 St. Louis St.; J. H. Fitzgerald, Jefferson Highway; L. W. Eaton, 1601 N. Blvd.; A. C. Stewart, 810 E. Blvd.; Robert Thibodaux, Goodwood Place, all Baton Rouge; H. J. Estrade, 7212 Washington Ave.; H. H. Harrison; J. A. Petty & Sons, Inc., Audubon Bldg., all New Orleans; Wm. T. Nolan, Archt., Canal Bank Bldg., New Orleans. 6-18

La., West Monroe, Monroe—Martin & Weiner soon ready for bids for one-story, 40x51-ft., brick store, Cypress and Clayton Sts., to be occupied by Sur-War stores; Jones, Roessle, Olschner & Wiener, Archts., Ardis Bldg., Shreveport.

N. C., Charlotte—J. E. and D. W. Mitchell, 1 Sunnyside Ave., erect \$13,000, 2-story brick store, 315 N. College St.

Tenn., Bristol—Lynch Realty Corp. rebuild one-story, 75x165 ft., brick and steel building, State and 9th Sts., recently damaged by fire; use present walls and floor; use steel frame for roof, may add another story, built-up flat roof, wire glass.

Tex., San Antonio—Eugene Lewenthal, care Kay's Fashion Shop, 230 E. Houston St.,

erect \$10,000, one-story, 47x84 ft., rein. conc., brick and hollow tile store, Pine and Van Ness Sts.; tar and gravel roof, wood floors, plate glass show windows, metal ceiling; Harvey P. Smith, Archt., Natl. Bank of Commerce Bldg.; Lilly-Drought, Engrs., Frost Natl. Bank Bldg.; bids in.

Theatres

Ark., Arkadelphia—Williams & Phillips erect theater to replace Royal Theater previously noted burned; to be leased by Cecil Cupp who will own equipment; seat 750 people.

Ark., Hot Springs—C. M. Jenkins erect one-story, brick and stone theater.

Fla., Hialeah—James Hodges, Miami, Miami Beach and Hialeah, plans supper club and theater; rein. conc., conc. block and stucco; seat 650 people.

La., Abbeville—R. J. Montagne receives bids June 29 for 50x121 ft., brick Frank Theater; Charles Davis, Archt., 1204 Jackson Ave., New Orleans.

Md., Federalsburg—Federalsburg Amusement Co., received bids June 26 for one-story, 105x50 ft., brick theater; John J. Zink, Archt., 2826 Overland Ave., Baltimore.

Warehouses

Tenn., Memphis—P. F. Crenshaw, 203 S. Camilla St., plans warehouse, DeSoto and Kentucky Sts.

Tex., Houston—T. L. Waugh & Son soon let contract for 9-story, stone and brick Waugh Bldg., Waugh Drive and W. Gray Ave.; steel or conc. frame; first floor for stores, second for offices and ninth for auditorium; remainder of building for storage purposes. Wyatt C. Hedrick, Inc., Archts.-Engrs.; plans to start work in July.

BUILDING CONTRACTS AWARDED

Association and Fraternal

Fla., New Warrington—Naval Lodge No. 24, A. F. & A. M., Wm. F. Hansen, Sec., Pensacola, started work on \$15,500 temple; brick and tile, wood partitions, plaster walls, sheetrock ceilings, 2 stories, 49x80 ft., pine and tile floors, conc. foundation, asbestos shingle hip roof, hollow tile; Walker D. Willis, Archt., Blount Bldg.; Jas. W. Eley, Contr., 922 E. Gregory St., both Pensacola. 6-11

Va., Williamsburg—Grand Lodge of Virginia, A. F. & A. M., let contract to J. W. Davis, Law Bldg., Newport News, Va., for Colonial temple; brick, 2 stories, 51x28 ft.; plans by Charles M. Robinson Architects, Times-Dispatch Bldg., Richmond. 5-28

Bank and Office

Ark., Mansfield—Martin & Son let contract to Looper & Lile to rebuild burned bank and store buildings; bank to be occupied by First National Bank.

D. C., Washington—Park Savings Bank, Geo. E. Walker, Pres., 14th and Kenyon Sts., erect \$40,000, 2-story, 70x100 ft., brick and limestone addition; A. P. Clark, Archt., 816 Fourteenth St., N. W.; Warren Spencer, Contr., 1350 Jonquil Road, N. W.

Mo., Kirkwood, St. Louis—State Highway Comsn., T. H. Cutler, Ch. Engr., State Highway Bldg., Jefferson City, let contract to M. E. Gillioz, Monett, for \$70,000 office and garage bldg., Lindbergh Blvd.; brick, steel and rein. conc., 2 stories and basement, 52x42 ft.; garage section 1 story and basement, 99x67 ft.

Okla., Oklahoma City—Vihlein-Ortmann, Milwaukee, has elect. contract for \$3,000,000 bank and office bldg. for First National Bank & Trust Co., on which enclosing walls are up 26 stories; Stone setting, Wilson-Winfrey Co., Slatery Bldg., Shreveport, La.; metal windows, Campbell Metal Window Corp., 228 N. LaSalle St., Chicago, Ill.; metal doors, Metal Door & Trim Co., La Porte, Ind.; cabinet work, Matthew Bros. Manufacturing Co., Pt. Washington Rd., Milwaukee; marble and tile, Taylor Marble & Tile Co., Inc., 511 W. Pine St.; lath and plaster, Maidt Plastering Co., First Natl. Bank Bldg., both Oklahoma City; stairs and fire escapes, Southwest Ornamental Iron Co., 1722 Tracy St., Kansas City, Mo.; Weary & Alford, Archts., 1923 Calumet Ave., Chicago; Edw. Smith, Resident Archt., Amer. Natl. Bank Bldg., Oklahoma City; Manhattan Construction Co., Contr., Manhattan Bldg., Muskogee, Okla., and Court Arcade Bldg., Tulsa, Okla. 6-4

Churches

D. C., Washington—Following have sub-contracts on \$200,000 bldg. for Church of Jesus Christ of Latter Day Saints: Fred Drew Co., Inc., 2539 Pennsylvania Ave., N. W.; D. D. Condon Co., 1318 Ninth St., N. W.; Joe High, Inc., 1215 13th St., N. W.; Standard Engineering Co., 2129 I St., N. W., all Washington; Young & Hansen, Archts., Salt Lake City, Utah; Don C. Young, Resident Archt.-Constr. Supvr., New Amsterdam Hotel, Washington; Wm. P. Lipscomb Co., Contr., 1406 K St., N. W. 5-21

Fla., Miami Beach—Miami Beach Baptist Church erect \$11,000 church, Sheridan Ave. and 28th St.; Wm. F. Brown, Archt., 651 Washington Ave.; L. O. Corbett, Contr., Whitehall Apts., 512 12th St.

Ga., Atlanta—Wesley Memorial Church, Rev. John E. Ellis, Pastor, 63 Auburn Ave., N. E., let contract to Jos. Shaw, Ga. Savings Bk. Bldg., to remodel interior of bldg., 63 Auburn Ave., N. E.; plans by Mr. Shaw. 4-2

Md., Baltimore—Patach Tikoh Congregation, 5103 Denmore Ave., let contract to A. Goodman, 2000 Whittier Ave., for brick addition to synagogue; 1 story, 24x61 ft., wood floors, Carey built-up roof; Saml. Smulian, Archt., 3721 Belle Ave. 6-18

Mo., Webster Groves—Webster Hills Methodist Church, Rev. E. W. Potts, Pastor, broke ground for first unit of \$300,000 church.

N. C., Albemarle—Central Methodist Church started work on remodeling church and Sunday school; erect 8-room brick parsonage; total \$14,000.

N. C., High Point—Hilliard Memorial Baptist Church, Rev. Hughey D. Miller, Pastor, erect \$25,000 church and Sunday school, Oak Hill Forest; plans and constr. supervision by Pastor.

City and County

La., New Orleans—City Comsn. Council let contract at \$68,907 to Reimann Construction Co., Maritime Bldg., for repairs and alterations to Dryades St. Market; cast stone, hardwood, terrazzo and tile floors, marble, metal doors, flat built-up roof, steel sash and trim, hollow and interior tile, ventilators, brass and bronze work; Sam Stone, Jr., & Co., Archts., Masonic Temple Bldg. 6-11

Okla., Asher—City, H. T. Hopkins, Clk., let contract to R. M. Everett, Asher, for city hall; 1 story; J. B. White, Archt., Ardmore. 6-11

Tex., Nacagdoches—Nacagdoches County Comms., Court let contract to John Hablin, Nacagdoches, to rebuild jail; cell work,

Southern Prison Co., 4500 S. Presa St., San Antonio; total about \$10,000.

Va., Richmond—City let contract to F. H. Boatwright, 2536 Chamberlayne Ave., for comfort station.

Dwellings

Ala., Mobile—Harry H. S. Smith remodel and enlarge residence; Hardy & Bost, Contrs.

D. C., Washington—J. J. James, 1226 14th St., N. W., erect 8 brick dwellings, 5606-30 Third St., N. W.; 2 stories, brick foundations, tin and slate roofs, 8 rooms, 2 baths, cast stone, electric refrigerators, hardwood and tile floors; Geo. T. Santmyers, Archt., 925 15th St., N. W.

D. C., Washington—L. E. Breuninger & Sons, Inc., Investment Bldg., have permit for \$10,000 brick dwelling, 7524 Morningside Drive, N. W., and \$19,000 dwelling, 1735 Holly St., N. W.; 2½ stories; owners build.

D. C., Washington—Edwin L. Taylor, 2032 Belmont Rd., N. W., erecting \$10,000 dwelling, 2817 Albemarle St., N. W.; solid brick, 2½ stories, 28x44 ft., oak and tile floors, elect. refrigerators, plaster board, interior tile, ventilators, slate roof; furnishings, equipment, etc., \$2000; Lois B. Taylor and R. Wood, Archts., 2032 Belmont; engineering and constr. by owner. 4-30

D. C., Washington—Following sub-contracts let on \$500,000 residence and garage for Raymond T. Baker, Wardman Park Hotel: Terrace flagstone, B. Ridgway & Son, 4300 Clarissa St.; shutter hardware, Murta, Apple-Hubb, Frankford; millwork, M. Wilt & Sons ton & Co.; sewage disposal system, Wm. R. Co., 711 N. Front St.; sheet metal and roofing, J. Edw. Linck Co., 2937 N. Marshall St.; waterproofing, Western Waterproofing Co., Liberty Trust Bldg., all Philadelphia, Pa.; limestone, Indiana Limestone Co., Bloomington, Ind.; excavation, grading, etc., J. H. Small & Son; dumbwaiters, Otis Elevator Co., 810 18th St.; brick work, Hammett Co., 3010 Wisconsin Ave.; concrete, J. B. Latimer Co., Inc., 1829 16th St., N. W.; rough hardware, Rudolph & West, 1332 New York Ave., N. W.; caulking, Chamberlain Metal Weatherstrip Co.; dampproofing, Ply-Rite Co., Barr Bldg.; plumbing, M. J. Colbert Co., 1908 M St., N. W.; heating, Thies Engineering Co., 4128 Georgia Ave.; ventilating, Murphy & Logan, 710 Morton St., N. W.; painting, E. W. Minto Co., 1213 12th St., N. W.; tile, Standard Art Marble & Tile Co., 118 E St., N. W.; iron work, Fred S. Gichner Iron Works, 1214 24th St.; wood floors, Marshall Flooring Co., 2500 Ninth St., N. E.; overhead doors, Overhead Door Sales Co., Barr Bldg.; glass, Pittsburgh Plate Glass Co., Fourth and Channing Sts., N. E., all Washington; carving and models, John Donnelly, Inc., 335 E. 46th St.; marble, Miller-Druck Co., 756 E. 184th St., both New York; stone setting and rubble stone, Seymour Ruff & Son, Inc., 2133 Maryland Ave.; vault doors and frames, York Safe & Lock Co., 7 W. Redwood St., both Baltimore, Md.; weatherstrips and screens, Johnson Metal Products Co., Erie, Pa.; struct. steel and steel erection, Lehigh Steel Co., Allentown, Pa.; Horace Trumbauer, Archt., 1406 Land Title Bldg., Philadelphia; Wm. P. Lipscomb Co., Inc., Contr., 619 Dist. Natl. Bank Bldg., Washington. 5-21

D. C., Washington—C. M. Remy, 2440 Massachusetts Ave., N. W., let contract at \$18,389 to W. E. Mooney, 2539 Pennsylvania Ave., N. W., for additions and alterations to residence; brick, cut stone, rein. conc., steel windows, struc. steel, tile, marble, waterproofing; Smith & Edwards, Archts., 1707 Eye St., N. W.

D. C., Washington—R. S. Pagliochini, care Edw. St. Cyr Barrington, Archt., 1336 New York Ave., erect \$30,000, 2½-story, 42x56 ft., brick, stucco, half timber, limestone trim residence, Alabama and Branch Aves., S. E.; 4-car garage; Paul J. Lubinski, Bldr., 1332 Fifteenth St., N. W. 6-11

D. C., Washington—James A. Wise erect 2½-story, brick residence, 31st and Legation Sts., N. W.; hot water heat, slate roof; J. Harvey Robey, Contr., 3103 Chesapeake St.; C. E. Dillon, Archt.

D. C., Washington—Paul T. Stone, 1427 Eye St., erect three 2½-story, brick and frame residences, 33rd St. and Broad Branch Road; slate roofs, hot water heat; C. E. Dillon, Archt.; owner taking sub-bids.

D. C., Washington—O. T. and M. A. Carr, Mills Bldg., erect two 2-story, brick, hollow tile and frame residences, 4920-28 4th St.; \$11,000, comp. shingle roofs, hot water heat; owners build. 6-11

D. C., Washington—Fouke & Harne, 1116 Orran St., N. E., erect 2-story, brick residence, 5551 Nebraska Ave.; slate roofs, hot water heat; M. Hallett, Archt.; owners build.

D. C., Washington—Harwood Terrace Development Corp., erect four 2-story, brick dwellings, 1729-35 Hobart St.; slag roofs, water heat; \$24,000; Shapiro Construction Co., Contr., both 1416 Eye St., N. W. 6-11

D. C., Washington—J. Austin Stone, 3039 44th St., N. W., erect \$11,000, 2-story, addition to residence; conc. tile, slate roof, hot water heat; V. Mindelef, Archt., 4416 Klinge St.; Morrison Bros., Contrs., Bethesda, Md.

D. C., Washington—D. C. Gruver, 927 Fifteenth St., erect sixteen 2-story, brick dwellings, 3731-61 W St., N. W.; tin roofs, hot water heat, \$95,000; owner builds; Geo. T. Santmyers, Archt., 1416 I St., N. W.

Fla., Miami Beach—Irving J. Reuter, Pontiac, Mich., and 1414 Coral Way, Coral Gables, Fla., let contract to John B. Orr, Inc., 147 N. E. Sixth St., Miami, Fla., for \$150,000 residence, 2946 N. Bay Rd.; fireproof, rein. conc. pan slabs, and tile and joist floor constr., Florida marble and tile floors and stair, tile and marble wainscoting, Fenestra steel sash, Cuban tile roof, probably rein. conc. piling foundation, Herman Nelson concealed radiation steam heat, 5 baths, 2 lavatories, 4-car garage, servants' quarters, boat docks and landing; terracing and landscaping; Carlos B. Schoeppl and John & Coulton Skinner, Archts., French Village, LeJeune Rd., Coral Gables. 3-26

Fla., Miami—C. L. Tallman will be supt. of construction for group to erect about 50 rent dwellings, Holleman Park; Universal Finance Co., C. H. Hale, Pres., organizing company; conc. block, 2 stories, 6 rooms and bath, 24x26 ft.; total about \$200,000; plans for first unit by George Bruce, Archt., 612 Meyer-Kiser Bldg. 3-26

Ga., Atlanta—Harold McKenzie Co., 2967 Peachtree Rd., considers erecting number dwellings, Ridgedale Park sub-division, Peachtree Rd.; owner builds.

Ga., Atlanta—Lee McClure, care U. S. Veterans Hospital, erect brick veneer residence, 1137 Cumberland Rd., N. E.; 1 story, comp. shingle roof, hardwood and tile floors, steam heat; day labor.

Ga., Atlanta—D. M. Byrd, Decatur, erecting residence Druid Hills; 2 stories, brick veneer, conc. found., slate roof; oak and tile floors; cast stone; plaster board; J. M. Russell, Archt., 907 Standard Bldg.; Wm. Alden, Contr., Decatur.

Ga., Cornelia—John J. Lowe erect frame residence; 1 story, 5 rooms, wood floors, shingle roof; Ye Planry, Inc., Archt., 1713½ Live Oak St., Dallas, Tex.; day labor.

Ga., Elberton—J. B. Coogler erect granite residence; N. Oliver St.; 1 story and basement, 7 rooms; Granite City Lumber Co., Contr.

La., New Orleans—Mrs. Chas. A. Dorhauer let contract at \$11,567 to Paul G. Charbonnet, 2010 St. Bernard Ave., New Orleans, for 2-story brick residence, Fairway Drive and Metairie St.

Md., Baltimore—Frank Murphy, Bldr., 200 W. Lombard St., plans dwelling, St. Dunstan's Rd. near Tilbury Way.

Md., Baltimore—A. E. Thompson, 25th St. and Huntington Ave., erect \$20,000 brick residence, Goodall Rd.; 2 stories, 36x78 ft.; J. Winthrop Wolcott, Archt., 324 N. Charles St.; Gunn, Williamson & Guy, Contrs., 305 N. Charles.

Md., Baltimore—Harry F. Page, Bldr., 327 E. 30th St., erect \$20,000 brick dwelling, Homeland; 2½ stories, about 40x32 ft.; Wrenn, Lewis, Westenhaber & Jencks, Archts., Title Bldg.; owner builds.

Md., Baltimore—Chas. H. Ritter, 1013 E. Preston St., erect stone and stucco residence and garage, Parkside Drive and Tyndale Ave.; 2 stories, 25x30 ft.; Jas. R. Cox, Archt., 4517 Harford Rd.; owner builds.

Md., Baltimore—Geo. R. Morris, Morris Bldg., erect stone and brick residence, Homeland; 2½ stories; Palmer & Lambdin, Archts., 513 N. Charles St.; Edw. A. Cullings, Contr., 692 Gladstone Ave.

Md., Baltimore—H. B. Ryland, 5208 Overcrest Rd., let contract to Monumental Construction Co., 2039 Park Ave., for brick residence; 2½ stories, 30x30 ft., hardwood and tile floors, conc. foundation, slate hip roof, cast stone, plaster board; Porter Bond, Archt., 911 Gorsuch Ave. 6-18

Md., Baltimore—John Welsh, 11 E. Fayette St., erect 20 dwellings and garages, 3300-20 and 3301-17 Prior Ave.; brick, 15.6x41 and 20x30 ft.; garages 10x18 ft.; Geo. Wessel, Archt., 601 W. 40th St.

Md., Baltimore—E. F. Baldwin, 2630 N. Charles St., erect frame residence, Westfield Ave.; 1½ stories, 24x40 ft.; W. C. Hall, Contr., 3514 White St.

Md., Baltimore—William H. DeWolf, 2426 Ellamont Ave., erect stone colonial-type dwelling, Croydon Rd., Milford; William S. Marriott, Bldr., Rockdale.

Mo., St. Louis—Mrs. Ralph Simpkins, 5328 Waterman St., alter residence; 3 stories; Jamieson & Spearl, Archts., Arcade Bldg.; Robt. Wright & Son, Contrs., 1404 Hamilton St.

Mo., St. Louis—J. P. Fendler, 5615 Lisette St., erect 2 brick dwellings, 5609-17 Gresham St.; 1-story, 28x45 ft., asphalt shingle roofs, hot air heat; total \$10,000; A. F. Stauder, Archt., 3600 Gravois St.; owner builds.

Mo., St. Louis—Paul E. Kummer, care Ewald Schroeder, Contr., 4642 Natural Bridge Ave., erect brick residence, Bel Nor; 1½ stories and basement, 47x42 ft., 2-car garage; Walter P. Manske & Associates, Archts., 4064 Olive St. 6-11

Mo., University City, St. Louis—Dr. Christy W. Pieper, 5826 Cabanne Ave., let contract to Berkley Construction Co., 6625 Delmar Blvd., University City, for \$11,000 brick residence, 7918 Gannon Ave.; 2 stories, 37x27 ft., cement block foundation, slate roof, hardwood and tile floors, plaster board, hollow tile; John Warren Teasdale, Archt., First Natl. Life Bldg., St. Louis; excavating. 6-11

Mo., University City, St. Louis—Roy P. Page, 1344 Waldron St., erect \$12,000 brick residence, 7277 Cornell Ave.; 2 stories, 30x36 ft., stone foundation, tile roof, hot water heat; owner builds.

N. C., Winston-Salem—J. B. Dyer, Jr., Reynolds Bldg., let contract to Fogle Bros. Co., 202 Belevs St., for \$60,000 residence, Reynolda Park; stone veneer, tile back-up, wood floor and roof constr., interior wood stud partitions, 2 stories, 78x121.8 ft., tile, oak and pine floors, conc. foundation, slate roof, limestone, marble, metal doors, steel sash and trim, hollow tile; Mayers, Murray & Phillip, Archts., 2 W. 47th St., New York. 6-18

Okla., Oklahoma City—A. A. Park, 2309 W. 17th St., erect \$14,000 residence by day labor; brick veneer, 2 stories; W. J. Laws & Co., Archts., First National Bank Bldg., completing plans.

Tex., Portland—Geo. B. Tannery, Jr., started work on frame residence, Clyde Ave.; 34x50 ft., screened porches; Ora Bloyer, Contr.

Va., Norfolk—Marlin Homes Corp. let contract to Marsteller Construction Corp., Dickson Bldg., for five residences at Pinewell; Phillip B. Moser, Archt., Law Bldg.

Va., Richmond—L. A. Bowen, 1300 Hull St., let contract to W. W. Welton, 2027 Boston Ave., for residence; Courtney S. Welton, Archt., Grace Amer. Bank Bldg. 6-11

Va., Richmond—Muhleman & Keyhoe, 505 E. Franklin St., erect 2 dwellings, 3920 Wythe St. and 1417 Bellevue Ave.; total about \$10,000.

Government and State

D. C., Washington—Navy Dept., Bureau of Yards and Docks, let contract at about \$10,000 to H. W. Cord Co., Inc., 1003 K St., N. W., for extension of Marine Corps barracks. 6-18

D. C., Washington—District Commrs., Dist. Bldg., let contract to Industrial Engineering & Construction Co., Northport, L. I., for sheds and facilities at Eastern and Western markets; \$10,000. 6-18

La., Mansfield—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., let contract at \$52,460 to Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala., for post office. 6-18

Mo., Kansas City—State Highway Comsn., T. H. Cutler, Ch. Engr., State Highway Bldg., Jefferson City, let contract at \$72,000 to M. E. Gillioz, Monett, for office and garage bldg.; brick and rein. conc., 2 stories, 52x42 ft. with garage section 96x66 ft. 6-11

S. C., Rock Hill—Otis Elevator Co., 810 18th St., N. W., Washington, D. C., has contract at \$10,664 for 1 passenger elevator, for \$275,000 post office, court house, etc.; Batson-Cook Co., Inc., Contr., West Point, Ga. 6-11

Tenn., Lookout Mountain—Constructing Quartermaster, James Bldg., Chattanooga, let contract to Smith Bros., 213 E. Tenth St., Chattanooga, for comfort station and caretaker's quarters, Point Park.

Tex., Randolph Field—Wolff & Marx Co., 202 W. Houston St., San Antonio, has contract at \$9749 for about 10,000 window shades for company and non-commissioned officers' quarters.

W. Va., Clarksburg—Thornton Brick Co. have contract for portion of brick for \$425,000 post office and court house; John Larga & Co., Contrs., 2672 Adams St., Gary, Ind. 4-9

Hospitals, Sanitariums, Etc.

Ala., Tuscaloosa—Following additional sub-contracts, reported, let on \$1,100,000 U. S. Veterans Hospital, for which H. B. Nelson Construction Co., 1201 Awsley Ave., Columbus, Ga., has gen. contract: Steel sash, Truscon Steel Co.; Rhodes-Haverty Bldg., Atlanta, Ga.; tile, Columbus Brick & Tile Co.; Fifth St., Columbus; roofing and sheet metal, Acme Roofing Co., 120 Bell St.; marble, tile and slate, Dagostin & Angelini Bros., Inc., 319 Monroe St., both Montgomery, Ala.; millwork, Acme Building Supply Co., Eighth Ave., Meridian, Miss.; plastering, W. T. Tuchfarler, Davenport, Iowa. 6-4

Ga., Savannah—Treasury Dept., Jas. A. Wetmore, Act. Supv. Archt., Washington, D. C., let contract at \$12,300 to John M. Geary Co., Arcade Bldg., Asheville, N. C., to remodel and enlarge Marine Hospital. 6-11

Md., Baltimore—Lloyd E. Mitchell, 2315 Cecil Ave., has heating contract for \$150,000 Hurd Memorial lecture hall, Johns Hopkins Hospital; elect. work, Bonnett Electric Co., 16 N. Greene St.; Office of Joseph Evans Sperry, Archt., Calvert Bldg.; Herman Doeleman, Struct. Engr., Balto. Trust Bldg.; Consolidated Engineering Co., Inc., Contr., 20 E. Franklin St. -20

Hotels and Apartments

D. C., Washington—Harry A. Kite, Inc., 1019 15th St., N. W., has permit for five 2-story, brick flats, 1011-1019 Seventeenth Place, N. E.; \$45,000.

D. C., Washington—Rosslyn Steel & Cement Co., 3031 K St., N. W., has contract for 360 tons rein. bars for two apartments for M. and H. Warren, Connecticut Ave. and Sedgwick St.

Fla., Jacksonville Beach—J. W. Haden, Propr. of Palmetto Lodge, let contract for addition to Oceanic Hotel.

Fla., Miami Beach—Following sub-contracts awarded on \$180,000, 3-story, 120x160 ft., Indian Creek Apartments for Wm. F. Whitman, 3201 Collins Ave., for which Mead Construction Co., 1000 Lincoln Road, has general contract: Plumbing, Alexander Orr, Inc., 145 N. W. Third St.; struc. steel and pans, Paul Shippe, 251 S. W. First Court; lumber, Fisher Lumber Co., 1400 S. W. First Ave.; incinerator, Brinson-Sistrunk Co., Security Bldg.; weatherstripping and caulking, Chamberlain Metal Weatherstrip Co., 37 N. W. First Ave.; Johns-Mansfield floor in kitchens, W. W. Lotspeich & Son, 435 N. W. South River Drive; rein. steel, S. E. Schilling Co., 125 N. E. Sixth St., all Miami; Gibraltar tile, Maule-Ojus Rock, Ojus, Fla.; foundation completed; Roy F. France, Archt., 952 Alton Road, Miami Beach. 6-11

Ga., Macon—Following additional sub-contracts awarded on 9-story and basement, 140-room addition to Hotel Dempsey under construction (struc. steel completed up to first floor level) for which Angle-Blackford Co., Am. Bank Bldg., Greensboro, N. C., has general contract: Struc. steel and erection, Carolina Steel & Iron Co., S. Elm St., ext., Greensboro; all masonry labor complete, Fred Dillman, Macon; combination metal bucks, Richmond Fireproof Door Co., Richmond, Ind.; marble, tile and terrazzo, Hugh Robinson, Columbia, S. C.; glass and glazing, F. J. Cooledge & Sons, 12 Forsyth St., N. W., Atlanta; painting, W. L. Taylor, Macon; vault lights, American Bar Lock Co., 37 30th St., New York; ventilouvers, The Ventilouvre Co., Bridgeport, Conn.; bath room mirrors, cabinets, fixtures, Jamestown Metal Products, Inc., Jamestown, New York; W. L. Stoddart, Archt., 50 E. 41st St., New York. 5-14

La., Baton Rouge—Following sub-contracts awarded on \$400,000, 7-story, 200-room hotel, Lafayette and Convention Sts., to be known as Hotel King for Interstate Hotel Co., A. C. Glassell, Pres., City Bank Bldg., Shreveport, for which Ashton Glassell Construction Co., City Bank Bldg., Shreveport, has general contract: Plumbing and heating, Standard Plumbing & Heating Supply Co., Inc., 227 Laurel St.; tile, General Tiles, Inc., 155 N. Dufrocq St.; millwork, Baton Rouge Sash & Door Works, Inc., all Baton Rouge; electrical, Moorman Electrical Co., 207 Crockett St., Shreveport; Edw. F. Neild, Archt., City Bank Bldg., Shreveport; use 3-story Standard Motor & Co. Bldg. as base; to be operated by Roy L. Heidelberg and Joe C. King. 3-5

Mo., St. Louis—Alco Investment Co., has permit for two 2-story, 34x54 ft., brick tenements, 5301-7 Pernod St.; \$20,000; tar and gravel and tile roofs, hot air heat; Swan Supply Co., Bldr., both 808 Chestnut St.; Nolte & Nauman, Archts., 3832 Pine St.

Okl., Oklahoma City—Dr. W. C. Cummings, 709 Walnut St., let contract to Roy F. Brower, 12 E. 27th St., S., for \$150,000,

6-story and basement, 50x140 ft., brick, stone, steel and rein. conc. apartment building; stores on first floor; 44 suites; Bernard Horton, Archt.

Miscellaneous

Fla., Miami Beach—George Bruce, Archt., Bank of Bay Biscayne Bldg., Miami, completed plans for improvements and addition to Villa Venice, 14th St. and Ocean Drive; dining hall to be enlarged, larger stage, new band shell and solarium; \$25,000.

Ga., Atlanta—Sam R. Greenberg & Co., 195 Forrest Ave., N. E., erect \$25,000, 2-story, 110x72 ft., brick, mortuary, 1145 Spring St.; slate and comp. roof; owner builds by day labor and sub-contract; Daniell & Beutell, Archts., 701 Georgia Savings Bank Bldg. 5-14

La., New Orleans—Seventh St. Protestant Orphans Home, 3020 Magazine St., let contract to W. E. Grogan, 2635 Octavia St., for extensions to building; work to include masonry, conc. work, carpentry, electrical work, plumbing, heating, slate roof, comp. roof, sheet metal work; Theard & Matthews, Archts., Balter Bldg. 6-11

Mo., St. Louis—Theo. Biederweiden, 3620 Chippewa St., erect \$28,000, one-and-two-story, 105x59 ft., brick mortuary; asphalt and slate roof, steam vapor heat; Henry Hinrichs, Jr., Bldr., 6440 Alabama St.; Theo. Steinmeyer, Archt., 3524 McKean St.

Schools

Ala., Auburn—Sigma Alpha Epsilon Fraternity erect \$17,000, brick fraternity building; Snellings Lumber Co., Contr., Phenix.

Ala., University—Alpha Delta Pi Sorority, University of Alabama, let contract to J. O. Holloman, Tuscaloosa, for \$18,000, 2-story and attic, 75x36 ft., brick veneer and frame sorority house; comp. shingle, built-up and tin roof, oak, pine and tile floors, electric refrigerators; Miller & Martin, Archts.; J. A. Lewis, Engr., Inc., both Title Guarantee Bldg., Birmingham. 6-18

Ark., Fayetteville—Delta Delta Delta, University of Arkansas, let contract for \$40,000 chapter house.

D. C., Washington—Public Buildings and Public Parks of National Capital, D. H. Gillette, Ch., Engr. Div., Navy Bldg., let contract at \$68,879 to Lee T. Turner, 1366 Perry Place, N. W., for cottage building at National Training School for Boys, Bladensburg Road, N. E.; also preparing for shops building and prob. be ready for bids in six to eight weeks. 6-11

Fla., Gainesville—University of Florida, P. K. Yonge, Chmn., Martin Bldg., Tallahassee, let contract to Atlantic & Gulf Construction Co., Jacksonville, for additions and changes to Section, Thomas Hall; 3 stories and basement, brick and tile; Rudolph Weaver, Archt., 200 Peabody Hall. 6-4

Fla., Griffin—Polk County Bd. of Public Instruction, Hugh W. Wear, Chmn., Bartow, let contract to Albionson Co., Bartow, for \$15,000, one-story and basement, 65x127 ft., brick, 6-classroom and auditorium school; Arch Holsinger, Archt., Courthouse, Bartow. 6-18

La., Amite—Tangipahoa Parish School Bd. let contract at \$16,515 to Anzalone Construction & Supply Co., Independence, for 1½-story, brick veneer school in Eighth Ward; asbestos shingle roof, steam heat; Favrot & Livaudais, Archts., Hibernia Bank Bldg., New Orleans. 5-28

La., Baton Rouge—Following additional sub-contracts awarded on group of dormitories at Louisiana State University for which J. V. & R. T. Burkes, Inc., 1112 American Bank Bldg., New Orleans, have general contract at \$281,225: Asphalt tile floor, Johns-Manville Sales Corp., Maritime Bldg.; finishing hardware, Gibbens & Gordon, Inc., 532 Canal St.; marble and interior stone, Interstate Marble & Tile Co.; painting, Frank J. Matthew Co., Inc., 918 Union St.; comp. roof and sheet metal work, The Groesbeck-Clotworthy Co., 1513 Calliope St.; terrazzo, United Tile & Terrazzo Co., all New Orleans; cast stone and stucco work, Pyramid Stone Co., 1107 National St., Houston, Tex.; glass and glazing, Binswanger & Co., 655 Union St., Memphis, Tenn.; medicine cabinets, Hess Warming & Ventilating Co., 1207 S. Western Ave., Chicago, Ill.; orna. and misc. iron, Price-Evans Foundry Corp., Anderson Ave., Chattanooga, Tenn.; plastering, Jacobson Plastering Corp., Candler Bldg., Atlanta, Ga.; Weiss, Dreyfous & Seiferth, Inc., Maison Blanche Bldg., New Orleans, and Wogan & Bernard, Canal Bank Bldg., New Orleans, and Old Raymond Bldg., Baton Rouge, Asso. Archts. 6-4

La., Hahnville—St. Charles Parish School Bd., J. B. Martin, Sec., has low bid at approx. \$117,000 and will let contract to Caldwell Brothers, 816 Howard Ave., New Or-

leans, for 2-story and basement, brick additions and alterations to high schools at Hahnville and Destrahan, and one-story and basement, brick school at Montz; Wm. Burk, Archt., Balter Bldg., New Orleans. 6-11

Md., Baltimore—Following sub-contracts awarded on addition to School No. 20, under construction (progressed to second floor level) for which The Lacchi Construction Co., Inc., 522 Munsey Bldg., has general contract at \$102,004: Waterproofing, Baltimore Waterproofing Co., 12 W. Madison St.; brick, tile and stone, B. Farane & Son, 5120 Harford Ave.; steel windows, Campbell Metal Window Corp., Bush and Hamburg Sts.; roofing and sheet metal, Wm. F. Zeller Co., Cross & Denver Sts.; plastering, Geo. W. Ament, 902 W. 36th St.; millwork, C. O. Wurzbarger & Sons, Annapolis Ave. and Western Maryland R. R.; terrazzo and blackboards, American Tile & Cement Co., 27 W. North Ave.; linoleum, Guaranteed Floors Co., 213 East St., all Baltimore; kalamein, Philip Manufacturing Co.; Frederic A. Fletcher, Archt., 517 N. Charles St. 5-21

Md., Baltimore—School Commrs., Bureau of Maintenance, 1230 E. 20th St., let following contracts for school repairs: Contr. E-39-31, painting School No. 51, \$3341, Pamfils Contracting Co., 305 N. Greene St.; Contr. E-40-31, painting School Nos. 49, 64, 81, 112, 209, \$8350, Shline & Son, 221 W. Centre St.; Contr. E-41-31, painting Schools Nos. 31, 32, 37, 129, 212, \$5487, Preisling, Inc., 1321 N. Water St., Philadelphia, Pa.; rejected following: Contr. E-32-31, painting School No. 111; E-20-31, electric work on Schools No. 1, 1A, 2, 13, 40, 47A, 52, 112, 156, 158, 212, 211, 227A, 227B, 293, 49; let contract at \$16,767 to L. J. McCourt, 861 Greenmount Ave., for improvements to Highlandtown School area; at \$17,922 to Chas. J. Spielman, 1929 Annapolis Road, for improvements to Glenmont School area; also let contract at \$16,164 to Joseph P. Foster & Sons, 224 N. Greene St., for Plumbing and heating to School 1-A. 6-18

Md., Laurel—Westminster Hardware Co., Westminster, has contract for heating and plumbing, and George A. Ford Co., 3908 Fourteenth St., N. W., Washington, D. C., has contract for electric work for \$115,000 domestic service building at District Training School for which A. Lloyd Goode, Inc., 11 E. Fifth St., Charlotte, N. C., has general contract; Albert L. Harris, Municipal Archt., District Bldg., Washington, D. C. 5-14

Miss., Fayette—United Vocational School Bd. of Trustees let contract at \$10,250 to P. J. Allgood, Brookhaven, for one-story, brick school and teachers' home. 6-4

Miss., Houlka—Houlka Consolidated School Dist. Trustees let contract at \$19,400 to W. C. Stout, Jackson, for one-story, 150x150 ft., brick school; 12 classrooms and auditorium, built-up comp. roof, steam heat; Frank P. Gates Co., New Merchants Bank Bldg., Jackson. 6-11

Miss., Magee—Bd. of Trustees of Magee School let contract at \$29,950 to Keeton & Fairley, Hattiesburg, for one-story, 201x103 ft., rein. conc. and brick school; 14 classrooms built-up comp. roof; Claude H. Lindsley, Archt., Tower Bldg., Jackson 6-4

Mo., Kansas City—Bd. of Education, E. C. Messervy, Pres., let contract to E. L. Winn Construction Co., Railway Exchange Bldg., for Fairmount School addition; auditorium, gymnasium, classrooms, dispensary, bookroom, kindergarten, vocational rooms and playground improvements; Charles A. Smith, Archt., Finance Bldg. 5-21

Mo., Linn Creek—Bd. of Education, Consolidated School Dist. No. 3, John M. Farmer, Pres., let contract at \$21,800 to G. A. Rector, 407 Main St., St. Joseph, for one-story and basement, 126x86 ft., brick, stone, tile trim school; H. E. Wagenknecht, Archt., 719 McDonald St., St. Joseph. 5-18

Mo., Portageville—Bd. of Education, Consolidated School Dist. No. 8, W. W. Largent, Sec., let contract at \$35,100 to J. A. Satterfield, Sikeston, for 2-story and basement, 112x102 ft., brick high school; R. Z. Gill & Co., Archts., 1328½ Walnut St., Murphysboro, Ill. 5-7

N. C., Durham—Duke University, Dr. W. P. Few, Pres., erect three 2-story and basement, brick, stone trim residences on campus; Muirhead Construction Co., Contr., First Natl. Bank Bldg.

Tenn., Gallatin—Bd. of Education, V. L. Harris, erect \$70,000, 2-story and basement, 165x165 ft., rein. conc., struc. steel, limestone or cast stone trim grammar school; comp. roof; E. E. Austin, Contr., 726 Commerce St., Nashville; Tisdale, Stone & Pinson, Archts., Ind. Bldg., Nashville. 6-11

Tenn., Gallatin—Sumner County School Bd. soon start work on 2-story and basement, 60x210 ft., brick, stone and conc. high school for which Cowan Lumber Co., Dickson, has contract at \$71,915; Hart & Stone, Archts., 601 Hitchcock Bldg., Nashville. 4-16

Marks of Good Management

THE most essential characteristic of management is organization. If management is right its organization is right. No need to go further to find the qualities that make for success.

Personality shows on the surface. Spirit and morale can not be hidden. Every detail of business transactions expresses their presence, or their absence.

No greater tragedy in business life than the failure of able, honest and potentially successful men. Modern Accountancy sees these failures often and emphasizes them as quite unnecessary. Success is not to the superman alone. Most often it comes from a right conception of organization and the application of a well-ordered plan. Every day, normal business intelligence discovers, and understands better these truths; and so is achieving more fully the results that mark good management.

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TOLEDO
TULSA
WASHINGTON
WHEELING
WINSTON-SALEM
YOUNGSTOWN

Tenn., Whiteville—Hardeman County Bd. of Education, Katherine Ingram, Sec., Bolivar, let contract at \$24,996 to J. Walter Jones Construction Co., 1051 Tanglewood St., Memphis, for one-story, 234x103 ft., brick veneer high school; E. L. Harrison, Archt., Fidelity Bank Bldg. 4-9

Tex., Winona—Bd. of Education started work on \$27,000, one-story, 143x122 feet, brick, 10-classroom and auditorium school; conc. and wood floors, tar and gravel roof, cast stone; G. E. Shirley, Contr., 3007 Swiss St.; C. H. Leinbach, Archt., 305 Central Bank Bldg., both Dallas. 6-4

Va., McKenney—Dinwiddie County School Bd., W. A. Scarborough, Supt., Dinwiddie, let contract to W. L. Brown & Co., Appamattox, for Sunnyside-McKenney School; 6 rooms; plans by Raymond V. Long, Archt. for State Bd. of Education, Richmond. 5-25

Va., Radford—Radford State Teachers' Colleg. let contract to H. A. Lucas, Colonial Natl. Bank Bldg., Roanoke, for \$60,000 library; 2 stories, 56x11 ft., brick and stone; Frye & Stone, Archts., MacBain Bldg., Roanoke; provide space for 75,000 volumes.

Stores

Ark., Mansfield—Looper & Lille have contract for rebuilding Martin & Son's store and First Natl. Bank previously destroyed by fire.

D. C., Washington—Northern Market Co. of Washington, 344 D St., erect one-story, 37x36 ft., brick store, 704 P St.; Charles Morgan, Bldr., Chevy Chase, Md.

D. C., Washington—Olivia Murphy, care L. W. Giles, Archt., 1200 You St., erect 2-story, 34x41 ft., brick store and apartment, 1839 Bennings Road, N. E.; J. J. Galvin, Bldr., 4215 Yuma St.

D. C., Washington—Sanitary Grocery Co., 1845 Fourth St., N. E., let contract to Warren Spencer, 1348 Monroe St., for one-story, 32x90 ft., brick store, 335 15th St., N. E.; limestone front, granite base; Julius Wenig, Archt., Edmonds Bldg. 6-18

D. C., Washington—Jos. Caponite, 911 Third St., N. E., erect 2-story, 25x36 ft., brick store and apartment, 1423 Good Hope Road, S. E.; tin roof, hot water heat; Wm. Angelletti, Bldr., 518 Third St., N. E.; Marcus Hallett, Archt., 915 Eye St.

Fla., Miami Beach—Taradash Properties, Inc., 933 Lincoln Road, let contract to Wm. S. Green Co., 1237 Twentieth St., for store, 711 Washington Ave., for Florida Power and Light Company; \$17,000; one-story, 50x130 feet, reinforced concrete, steel, concrete block and stucco; built-up roof, cast stone, vault doors, steel sash, vaults, ventilators, bronze work; equipment, furnishings, \$5000; Alexander Lewis, Archt., Lincoln Road Patti, Miami Beach; Belsham-Jorgenschraffler, Engrs., Calvert Bldg., Miami.

Ga., Atlanta—Hugh Richardson, 160 Peachtree St., N. E., erect 2-story and basement, 100x100 ft., rein. conc., brick and tile store, Williams and Harris Sts., N. W.; stone trim, built-up roof; owner prob. build by day labor; Pringle & Smith, Archts., Norris

Bldg.; name and address architect recently incorrectly reported. 6-18

Md., Baltimore—Louis Handelman, 4221 Pimlico Rd., erect 2-story, brick store and dwelling, Pimlico Road and Park Heights Ave.; Jacob Mizzen, Contr., 4015 Park Hgts. Ave.; Frederick E. Beall, Archt., 334 St. Paul St. 6-4

Md., Baltimore—Rubin Bender, 716 Poplar Sequoia Ave., for one-story, 14x11 ft., brick Grove St., let contract to B. Krucoff, 3810 addition and remodeling two stores into one. 6-18

N. C., Rockingham—Belk Department Store let contract at \$13,000 to L. S. Costner, Cherryville, to remodel Sanford Bldg.

N. C., Wilmington—Eldred's Department Store, C. L. Eldred, Mgr., 222 N. Front St., started work on remodeling program entailing expenditure of \$30,000; erection new elevator shaft, interior improvements and new fixtures; Otis Elevator Co., 1373 E. Sixth St., has contract for elevators; Tyler & Co., Superior Ave. and E 36th St., both Cleveland, Ohio, automatic fireproof elevator doors; R. H. Brady, 408 Church St., Wilmington, 5-story elevator enclosure and penthouse.

Warehouses

D. C., Washington—Isador Young, 5701 Sixteenth St., erect 2-story, 21x137 ft., brick office and warehouse, Maryland Ave., S. W., between 11th and 12th Sts.; steam heat; Geo. T. Santmyers, Archt., 925 Fifteenth St., N. W.

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Machinery and Supplies

Elevator Head.—Luray Ice Co., Luray, Va.—Wants one electric elevator head, motor driven, 220-volt, 60-cycle, 3-phase, suitable for 1000 lb. lift.

Engines.—Herman Schauwecker & Sons (Machinists, Engineers), Parkersburg, W. Va.—Wants prices and data on 50 or 60-h. p. Fairbanks-Morse old type horizontal gas, gasoline or oil engines.

Fertilizer Machinery.—Paul Horton, 508 Cherry St., Helena, Ark.—Wants data and prices on machinery for grinding fish to make nitrogen material for use in manufacture of fertilizer.

Generator.—W. M. Smith & Co. (Mchy. Dealer), Box 1709, Birmingham, Ala.—Wants prices and data on 125-kw., direct current generator driven by a c. motor, 220 or 440 volts.

Handle Making Machinery.—T. L. Jeffers, Holly Hill, S. C.—Wants prices and data on machinery for making all kinds of handles, such as those for hoes, rakes, mattocks, axes, hammers, etc.

Tank (Steel).—Toccoa Furniture Co., Toccoa, Ga.—Wants used steel tank, 12,000 to 15,000 gal. capacity.

General Utilities Co. (Equipment Dealers), 254-56 W. Tazewell St., Norfolk, Va.—Wants following:

- (1) Concrete Mixer—2-bag
- (2) Crane (Clamshell and Ditcher)—half circle or full revolving crane with clamshell and ditcher attachments
- (3) Trailer—20-ton
- (4) Paver—13-E preferred.

Liberty Veneer Co., Inc., Cyrus Schoffner, Sec., Liberty, N. C., rebuilding burned veneer plant and wants prices and data on following (may be used in good condition):

- (1) Veneer Lathes
- (2) Mechanical Dryers
- (3) Clippers
- (4) Trim Saws.

Louis F. Davison, Box 188, Harrisonburg, Va.—Wants prices and data on following:

- (1) Jointer—16 in.
- (2) Saw (Band)—30-32
- (3) Saw (Cut-off)—No. 7½, Yates American or similar type
- (4) Saw (Rip)—No. 1, Yates American
- (5) Shaper—single spindle
- (6) Surfacers—single, round head, 30-32.

Miscellaneous

Agricultural Implements.—P. O. Box 448, Jacksonville, Fla.—Wants bids on manufacturing two lines of agricultural implements; includes grey iron and aluminum castings and small amount of wrought iron work.

Enameled Metal.—Public Investment Co., Inc., C. C. Bancroft, Consol. Engr., 423 Carondelet St., New Orleans, La.—Wants prices and data on enameled metal such as used in tops of low cost tables.

Toy Cultivators and Plows.—Frank Beasley, 15 W. Lancaster Rd., Richmond, Va.—Wants prices and data on manufacture of small toy cultivators and turning plows made of steel or other metal with wooden horses, complete and packed in cartons for shipping.

Luray Ice Co., Inc., Luray, Va.—Wants following:

- (1) Asphalt—2000 lbs.
- (2) Cork Board—6000 sq. ft. 3-in. cork board or similar material for cold storage insulation
- (3) Insulating Paper—6000 sq. ft.
- (4) Steel Pipe—1000 lin. ft. 2-in. black steel, direct expansion pipe.

Building Material and Equipment

Fred R. Comb. Co., 2123 Chicão Ave., Minneapolis, Minn., estimating on \$1,240,000 post office, Fort Worth, Tex., wants bids until July 1 on materials, steel, orna. iron and bronze, stone, granite, marble, terrazzo, plastering, painting, glas. millwork, hardware, plumbing, heating, electrical work, etc.

Arthur W. Brown, Bldr., 4236 Eighth St., N. W., Washington, D. C., wants prices on following for dwellings:

- Electric Refrigerators
- Flooring—hardwood
- Plaster Board
- Roofing—asphalt shingle.

Rev. Ralph Wolfe, Box 192, Muskogee, Okla., wants prices on following for \$40,000 to \$50,000 church:

- Flooring—hardwood, tile
- Metal Ceilings
- Plaster Board
- Roofing—asphalt shingle, built-up
- Tile—hollow, interior
- Wire Glass.

M. Frank Tranzillo, 2039 Park Ave., Baltimore, Md., wants prices on following for dwellings:

- Cast Stone
- Flooring—hardwood, tile
- Plaster Board
- Roofing—slate.

R. H. Stone Jefferson, N. C., wants prices on following for church:

- Flooring—hardwood
- Plaster Board
- Roofing—asbestos shingle, asphalt shingle
- Rolling Partitions
- Rolling Partitions
- Steel Sash and Trim
- Tile—hollow
- Wire Glass.

Alex M. Robinson, Pres., School Bd., Smithfield, Ky., wants descriptive literature on following for 1-story school building:

- Fire Escapes.

Carolina Construction Co., 500 Walker Bldg., Greenville, S. C., estimating on \$35,000 addition to dining hall at Winthrop College, Rock Hill, S. C., for which bids are to be opened July 2, and wants prices and sub-contract bids.

The John W. Cowper Co., Inc., State Planters Bank Bldg., Richmond, Va., estimating on warehouse at Huntington, W. Va., for Chesapeake & Ohio Rwy. Co., C. W. Johns, Ch. Engr., Richmond, and wants prices and sub-bids by June 27.

Bids Asked

Aerial Photographs.—U. S. Engineer Office, Coal Exchange Bldg., Huntington, W. Va.—Bids July 20 for aerial photographs of portions of valleys of Kanawha and Pocatalico Rivers, Thirteen Mile, Lens, Withers, Fields, Cabin and Kelleys creeks; sets of contact prints, enlargements and mosaics.

Air Compressor.—U. S. Engr. Office, Huntington, W. Va.—Bids July 5 for air compressor for Lock 18, Ohio River.

Bending Brake.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for motor driven bending brake. Sch. 5942.

Binder Equipment.—Duval County Com. Mrs., Wm. P. Belote, Chmn., Jacksonville, Fla.—Bids July 10 for binder equipment for use in office of clerk of Circuit Court.

SHIPS and HYDRAULIC EQUIPMENT

NEWPORT NEWS Shipbuilding and Dry Dock Company is one of the country's largest shipbuilders. It has built and is still building America's finest and largest naval and merchant vessels.

Its equipment includes piers, shipways, drydocks; structural, boiler, forge, machine, pattern and joiner shops; iron, steel and brass foundries, paint factory, etc., embracing practically all of the major trades, and occupying an area of about one hundred and fifty acres, served by fifteen miles of standard gage tracks.

Post-war conditions have permitted the inclusion of other products which the skilled mechanics educated to the exacting standard of marine workmanship are especially qualified to handle.

With the same organization and with only minor changes in equipment, this complete industry, established primarily for shipbuilding, rebuilt locomotives and built freight cars, creosoting cylinders, hydraulic turbines and many specialized products.

Aside from ships, the standard products of this plant now include hydraulic turbines, penstocks, flood gates, crest gates, butterfly valves, power operated trash rakes, trash racks, etc.

Correspondence in connection with hydro-power equipment is cordially invited.

Newport News Shipbuilding and Dry Dock Co.

Newport News

Virginia

90 Broad Street, New York, N. Y.

Brass Water Piping, Heating, Plumbing.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids June 29 for brass water piping, heating and plumbing changes, U. S. post office, Florence, Ala.

Building.—U. S. Coast Guard Headquarters, Washington, D. C.—Bids June 29 for construction of 1-story steel framework building with metal siding, 61 ft. 6-in. by 85 ft., with pile foundation enclosing a boat basin and gas engine shop, Curtis Bay (Md.) Depot.

Checkpoint.—U. S. Engineer Office, Huntington, W. Va.—Bids June 29 for checkpoint for Ohio River locks 14 to 28. Cir. 31-259.

Clearing.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids June 29 for clearing portion of site of Extensible Bldg., U. S. Dept. of Agriculture, Washington.

Concrete Paving.—Mayor and City Council, Easton, Md.—Bids July 1 for 1500 sq. yds. conc. paving.

Crushed Stone.—State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, S. C.—Bids June 29 for crushed stone for bridge surfacing.

Cutter and Tool Grinder.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for motor driven cutter and tool grinder. Sch. 5931.

Ditcher, Telephone Cable, Loading Coils, License Tags.—Panama Canal, Office of General Purchasing Office, Washington, D. C.—Bids July 6 for gasoline-engine-driven ditcher, telephone distribution cable and loading coils and motor vehicle tags. Sch. 2664.

Dredging.—U. S. Engineer Office, Galveston, Tex.—Bids July 17 for dredging 4,740,000 cu. yds. material in Houston Ship Channel.

Dredging.—Director of Operations, U. S. Shipping Bd., Merchant Fleet Corp., Washington, D. C.—Bids June 30 for dredging at U. S. Shipping Bd. terminal, Norfolk, Va., to secure depth of 30 ft. below MLW.

Dredging.—U. S. Engineer Office, Seattle, Wash.—Bids June 30 for dredging in Duwamish Waterway, Seattle Harbor, Wash.

Dredging.—Constructing Q. M. Fort Mason, Cal.—Bids June 29 for dredging at Army Transport docks.

Diving Equipment.—U. S. Engineer Office, Huntington, W. Va.—Bids June 29 for diving equipment, Marietta subdistrict. Cir. 261.

Dry Cleaning Plant.—Constructing Q. M. Room 2335 Munitions Bldg., Washington, D. C.—Bids July 1 for dry cleaning plant at Fort Myer, Va.

Electric Refrigerators.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids June 29 for 50 electric refrigerators, delivery Quantico, Va.; 6 for delivery New York; 5 for delivery Sewell's Point, Va.

Electrical Supplies.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids June 29 for electrical supplies, delivery Quantico, Va.

Engine Lathes.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for motor driven engine lathes. Sch. 5943.

Fans.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids June 29 for 15 fans, delivery Quantico, Va.

Filters, Pumps, Tanks.—General Purchasing Office, The Panama Canal, Washington, D. C.—Bids July 2 for wooden-tank gravity water filters, centrifugal water pumps, elevated steel tank, wood water tanks, and steel septic tank.

Furniture.—Supply Division, Treasury Dept., Washington, D. C.—Bids June 29 for 20 Cogswell chairs and 20 mattresses; table lamps; bath rugs; floor lamps, bed springs; mattresses; chairs; sofas; tables; stands; Cir. 9665.

Gasoline, Oil.—U. S. Property and Disbursing Office, State Capitol, Lincoln, Neb.—Bids July 8 for 10,000 gal. gasoline, 800 gal. lubricating oil, 150 lb. transmission.

Gasoline.—Quartermaster, Fort Hoyle, Md.—Bids July 7 for 14,000 gal. motor gasoline.

Grader (Power).—Sanitary and Drainage Comsn., E. D. Jervy, 39 Broad St., Charleston, S. C.—Bids July 2 for one man power grader, powered by 10-20 McCormick Deering or equal.

Hospital Equipment.—Supply Division, Treasury Dept., Washington, D. C.—Bids June 29 for 6 instrument cabinets; 3 com. mode chairs; 6 invalid chairs; 12 chairs; 6 steel costumers; 12 soiled-linen hampers; 6 bedside tables; 6 cradle supports. Cir. 9694.

Hub Assemblies.—Contracting Officer, Material Division, Air Corps, Wright Field, Dayton, Ohio.—Bids July 6 for 80 hub assemblies. Cir. 27.

Levee.—U. S. Engineer Office, 428 Customhouse, St. Louis, Mo.—Bids July 8 for placing about 157,000 cu. yds. earthwork in reconstructing and enlarging levee of Crane Creek Drainage and Levee District, Schuyler County, Ill.

Levee.—U. S. Engineer Office, 1006 McCall Bldg., Memphis, Tenn.—Bids July 7 for 1,498,000 cu. yds. earthwork in Lower St. Francis Levee District.

Manhole Tops.—Signal Corps, U. S. Army, 1819 W. Pershing Rd., Chicago, Ill.—Bids July 6 for 230 manhole tops.

Moulder.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for electric moulder. Sch. 5934.

Painting.—Bd. of Awards, office of City Register, Baltimore, Md.—Bids July 1 for interior and exterior painting of Sydenham Hospital, Herring Run and Harford Rd.

Photographic Laboratory.—Constructing Q. M. Fort Monroe, Va.—Bids July 16 for photographic laboratory.

Photostat Paper.—Duval County Commrs., Wm. P. Belote, Chmn., Jacksonville, Fla.—Bids July 10 for approx. 400 rolls photostat paper.

Pontoons, Trucks.—U. S. Engineer Office, Box 667, Vicksburg, Miss.—Bids June 30 for 16-in. pipe line pontoons and trucks. Cir. 676.

Power Line Crossing.—U. S. Engineer Office, Huntington, W. Va.—Bids June 29 for 6600-volt power crossing at Lock No. 8, Kanawha River.

Power Plant, Dam, etc.—Panama Canal, Purchasing Dept., Washington, D. C.—Bids Sept. 1 on construction of Madden Dam, power and appurtenant works, Madden Dam projects, Canal Zone; specification No. 2665, ready for distribution about July 1.

Power House Improvements.—W. M. Lovelless, Bus. Mgr., College of Industrial Arts, Denton, Tex.—Bids June 29 for power house revision, conc. tunnels and tunnel pipings and equipment; plans from R. F. Taylor, Const. Engr., 1305 Santa Fe Bldg., Dallas, Tex.

Riveting Hammer, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for rivet-sets, pneumatic riveting hammer, flush point. Sch. 5940.

Roads.—U. S. Veterans Bureau, Room 764, Arlington Bldg., Washington, D. C.—Bids July 14 for constructing and resurfacing roads at U. S. Veterans hospital, Sheridan, Wyo.

Roads.—State Highway Dept., Dover, Del.—Bids July 9 for contracts 156, 193, 196, 197 and 198; 156 includes 25,000 cu. yds. excavation, 5500 tons broken slag base course, 180 cu. yds. Class A conc., 14,000 lbs. rein., 1390 lin. ft. 15 to 36-in. pipe; 193 includes 18,000 cu. yds. excavation, 4500 tons broken slag base course, 200 cu. yds. Class A conc., 8500 lbs. rein., 18,000 lbs. struc. steel, 1124 lin. ft. 15 to 30-in. pipe, 1400 ft. timber piling, 3000 ft. b. m. sheet piling; 196 involves 800 cu. yds. borrow, 2000 cu. yds. gravel surfacing; 197 includes 3000 cu. yds. excavation, 2500 cu. yds. gravel surfacing, 120 lin. ft. pipe; 198 includes 200 cu. yds. excavation, 6000 sq. ft. conc. sidewalks, 1000 lbs. catch basin and drop inlet castings, 40 lin. ft. pipe.

Roads, Water and Sewer Lines.—Constructing Q. M. Fort George G. Meade, Md.—Bids July 3 for construction of service roads, sidewalks, water lines, sanitary and storm sewer lines, manholes and catch basins for Officers' and Noncommissioned Officers' areas.

Roads.—State of Arkansas—Bids for 2 roads. See Construction News—Roads, Streets and Paving.

Road Materials.—Louisiana Highway Comsn., O. K. Allen, Chmn., Baton Rouge, La.—Bids June 30 for washed and screened gravel, 40% sand-clay gravel, reef shell, clam shell, crushed limestone, slag and sand required for month of July.

Sewage Treatment Plant, Sewers.—City of McPherson, Kans., D. R. Maltby, Mayor.—Bids July 7 for sewage treatment plant and main sewers; E. T. Archer & Co., Engrs., 609 New England Bldg., Kansas City.

Sewage Disposal Plant.—Constructing Q. M. Selfridge Field, Mich.—Bids July 16 for sewage disposal plant, pump, pumping equipment and dipe connections.

Sidewalks.—Constructing Q. M. Fort Monroe, Va.—Bids July 3 for sidewalks for apartment buildings 45, 51, 52, and 64.

Silk.—Contracting Officer, Material Division, Air Corps, Wright Field, Dayton, Ohio.—Bids July 8 for 94,192 yards parachute silk. Cir. 26.

Steel Bars, Shapes, Plates, etc.—New York Central Railroad Co., C. C. Warne, Purchasing Agent, Room 344, 466 Lexington Ave., New York.—Bids June 29 for steel bars, steel shapes, steel plates, etc., covered by Serial Contract No. 8-1931.

Steel Tires (Locomotive).—Norfolk & Western Railway Co., Clyde Cocke, Purchasing Agent, Room 351, N. & W. Bldg., Norfolk, Va.—Bids July 1 for locomotive steel tires, July 1 to Sept. 30, Contract Serial AA-612.

Steel Wheels.—New York Central Lines, W. C. Bower, V. P. in charge of purchases and stores, Room 344, 466 Lexington Ave., New York.—Bids June 29 for steel wheels required by N. Y. C. lines Serial Contract No. 9-1931.

Streets.—Greensboro, N. C. See Construction News—Roads, Streets and Paving.

Shelving (Steel).—Marine Corps, Q. M. Dept., Washington, D. C.—Bids June 29 for 4 units steel shelving and counter unit, delivery Charleston, S. C.; also 4 units steel shelving and counter unit, delivery Pensacola, Fla.

Stone.—U. S. Engr. Office, Huntington, W. Va.—Bids June 30 for stone for crib filling, Locks 6 and 7, Kanawha River, Item 31.

Sewers.—Comms. of Sewerage, Matt H. Crawford, Chmn., Louisville, Ky.—Bids June 26 for sewer submain in Peachtree St. district; 1568 lin. ft. 51 and 46-in. sewer; 901 ft. 21-in. and 15-in. circular vitrified pipe sewers; manholes; 51,000 lb. steel rein. bars; 1000 cu. yds. plain or rein. conc.; 4313 lin. ft. trench excavation.

Tank.—Constructing Quartermaster, Maxwell Field, Montgomery, Ala.—Bids July 17 for constructing 300,000-gal. steel tank on 100-ft. trestle, Maxwell Field.

Tile Floors, Wainscoting, etc.—S. L. Christian, M. O. C., U. S. Marine Hospital, Norfolk, Va.—Bids June 30 for removal of cement topping from floors and cement plaster from walls of 50 rooms and installation of tile floors and tile wainscoting, terrazzo receptors in shower bath enclosures; 5697 sq. ft. white tile; 600 sq. ft. red tile.

Timber (White Oak).—U. S. Engr. Office, Huntington, W. Va.—Bids June 30 for white oak timber for repairs to guide wall, lock No. 7, Kanawha River, Item 31.

Tires and Tubes.—Sanitary and Drainage Comsn., E. D. Jervy, 39 Broad St., Charleston, S. C.—Bids July 2 for truck tires and tubes.

Traffic Lights.—City of Natchez, Miss., Lemuel P. Conner, Clerk—Bids July 28 to furnish and install traffic lights; plans, etc., at office of city clerk.

Ventilating System.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids June 29 for ventilating system, delivery Quantico, Va.

Ventilating Equipment.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids July 6 for fan room and ventilating equipment, post office, Owensboro, Ky.

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids July 2 for following:

Cable (Lighting and Power)—5200 ft., for New York Harbor; Sch. 5927

Corrugated Furnaces—New York, San Francisco; Sch. 5913

Pneumatic Rivet Sets—300; Mare Island; Sch. 5940

Glass (Nonshatterable)—290 sheets; Puget Sound; Sch. 5935

Kraft Paper—10,200 lbs.; Sch. 5933

Cloth (Black Enamel)—8500 yds.; Mare Island; Sch. 5932

Timber (Structural)—16,000 ft.; Brooklyn; Sch. 5921

Bar Rivet Steel—east and west yards; Sch. 5953

Telegraph Chains (Mechanical, Brass)—400; Sch. 5941

Telegraph Keys and Sounders—40; east and west yards; Sch. 5917

Boat Planking—22,000 ft. b. m.; Mare Island; Sch. 5936

Horns—various yards; Sch. 5949

Rosin—30,000 lbs.; Sch. 5970

Steel Shears—1440; Brooklyn; Sch. 5950

Manganese Nickel—32,000 lbs.; various yards; Sch. 5947

Condenser Tubes—43,800 lbs.; Phila.; 5045

Antimony—16,000 lbs.; various yards; Sch. 5969

Steel Head Shells—55; Newport; Sch. 5939

Aluminum, Aluminum Alloy—sheet and ingot; various yards; Sch. 5968.



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INDUSTRIAL NEWS

Selects Most Beautiful Bridges

A jury of leading architects and engineers, acting for the American Institute of Steel Construction, New York, have adjudged the Washington Avenue Bridge in Chicago and the Delton Bridge in Sauk County, Wisconsin, as the most beautiful bridges of their class built in 1930 in the United States and Canada. Judged in the class of bridges costing \$1,000,000 or more to construct, the Washington Avenue Bridge, a bascule structure spanning the Chicago River and designed by Thomas G. Pihlfeldt, Department of Public Works, Chicago, was fabricated by the American Bridge Company, New York. The Sauk County bridge, in the less than \$500,000 class, was designed by the Wisconsin Highway Commission and was fabricated by the Lakeside Bridge & Steel Company, Milwaukee.

Degree for George Gordon Crawford

The degree of Doctor of Science has been conferred upon George Gordon Crawford, president of the Jones & Laughlin Steel Corporation, Pittsburgh, by the Georgia School of Technology, Atlanta, from which he graduated in 1890 with the degree of Bachelor of Science in mechanical engineering. Mr. Crawford completed his technical education in Germany. In 1907 he was made president of the Tennessee Coal, Iron & Railroad Company, Birmingham, a subsidiary of the United States Steel Corporation. Mr. Crawford became president of the Jones & Laughlin Steel Corporation in 1930.

Gregg Construction Company

That it may more widely extend its field of service, the Sabine Engineering Company, Longview, Tex., which does a large amount of surveying in the East Texas oil field, has organized the Gregg Construction Company as a subsidiary. Officers of the new company include: W. E. Jones, president; E. E. Embrey, vice president and treasurer, and H. W. Turner, secretary and treasurer. The organization will specialize in pipe lines, loading racks, steel and wooden derricks, highway work, concrete and steel bridges and general oil field construction.

Aluminum Alloy Boom for Excavator

An aluminum alloy boom for use on a large type Marion dragline excavator has been shipped by the Marion Steam Shovel Company, Marion, Ohio, to the McWilliams Dredging Company, Chicago, a large contractor on Mississippi River work. This light boom is thought to be the first of its kind built for a large dragline.

Standard Gas Finance Committee

Directors of the Standard Gas & Electric Company, Chicago, have elected a finance committee composed of the following: B. W. Lynch, chairman; Robert J. Graf, J. H. Briggs, Louis H. Seagrave and Victor Emanuel.

National Paving Brick Association

At a meeting in Cincinnati, Ohio, June 5, the National Paving Brick Manufacturers Association, with headquarters at Washington, D. C., adopted the name of National Paving Brick Association.

Sale of Coal Yard and Business

A coal yard and fuel oil business which was to have been offered at public auction July 6 by J. G. Deshler, Asheville, N. C., receiver of the Southern Coal Company, will be offered on July 13 instead. Information regarding the sale may be obtained from Mr. Deshler.

Lamp Warehouse in Dallas

Plans have been made by the Incandescent Lamp Department of the General Electric Company, Nela Park, Cleveland, Ohio, to open a regional lamp warehouse in Dallas, Tex., July 1, according to W. A. Ruehl, traffic manager of the Nela Park organization. With 30,000 square feet of storage space, the new warehouse will carry about 3,000,000 large and miniature lamps to supply Texas, Oklahoma and New Mexico, giving a 24-hour service. W. G. Worsley, formerly of Nela Park, will be in charge. This is one of ten warehouses maintained by the company throughout the country, one being located in Atlanta and another in St. Louis.

Angular Construction Plan

Angular Construction, headed by Wm. J. Heim, architect, of Avon Park, Fla., has developed a new plan for buildings of all types designed to "increase the natural benefits of greater sunshine, light, ventilation and view at a very slightly increased first cost, which is more than absorbed in the increased revenue of the first year's operation." The advantages are set forth by the designer as follows: More rooms with corner exposure, with two-way view, and two and three-way ventilation; increased hours of sunshine; no inner hall to pass through; no door interference; no lights required for closet; no noise from opposite bath, each of which is separately enclosed; less noise from pipes and ducts; greater income from corner rooms. Angular Construction is suggested as particularly desirable for hotels, hospitals, apartments, schools and office and commercial structures. Projects which have been detailed and the factors computed show an additional cost of around 2 per cent, with a prospective additional revenue of more than 10 per cent annually.

LaPlant-Choate Brush Cutter

Formerly known as the "Hauser" Brush Cutter, designed to clear land quickly and cheaply, the LaPlant-Choate brush cutter, now manufactured solely by the LaPlant-Choate Manufacturing Co., Inc., Cedar Rapids, Iowa, has been tested for the past ten years in Canada, where 200 are in use. The machines are ready for distribution on "Caterpillar" Sixty and Thirty tractors, having a cutting width of 12 feet for the former and 9 feet for the latter. With a V type cutting edge and a V type nose structure, the cutter shaves the brush and timber off at ground level, leaving a comparatively smooth trail. Cutting edges are of crucible steel fastened to the bottom of the wedge-angle with heavy bolts. Average cutting work in the heavy wooded districts of Canada was 10 to 12 acres a day, it is said, and on that work it was necessary to sharpen the cutting edges after approximately 50 acres were cleared.

Power Shovels on Hoover Dam

The May-June number of The Groundhog, house organ of the Marion Steam Shovel Company, Marion, Ohio, carries an interesting story relating to a contract recently awarded the Marion company for power shovels to be used on construction of the Hoover dam on the Colorado River. This contract was awarded by the Six Companies, Inc., San Francisco, general contractors for the project. The dam will be the largest in the world, it is said, and will create the largest artificial lake, while the power development will be between 1,000,000 and 1,200,000 horsepower. Total cost of the entire flood control, water supply and power program is estimated at \$400,000,000. While the number of shovels required has not been determined, Marion machines in a wide range of activities will be used on all parts of the dam construction.

Trade Literature

Gilmer V-Belts.—This is the title of a new V-belt catalog issued by the L. H. Gilmer Company, Philadelphia, manufacturers of endless belts. The publication is divided into a general section devoted to advantages of V-belt drives and illustrating a number of applications and an engineering section, presenting a wide range of data and tables.

Industrial Accidents.—The 1931 edition of "Industrial Accident Statistics," presenting a comprehensive report on accident injuries in 28 American industries for 1930 and previous years, has been issued by the National Safety Council, Chicago. The publication condenses the 1930 accident experience of 4200 industrial establishments, representing more than 5,000,000,000 man-hours of work.

Dealer an Adviser.—The Policyholder Service Bureau of the Metropolitan Life Insurance Company, New York, has issued a booklet, "Making the Dealer an Adviser," presenting the experiences of a representative list of companies with a new plan for organized cooperative relationship between manufacturer and dealer.

Commercial Directory.—The New Orleans Association of Commerce has issued the Red Book of New Orleans Commerce, Buyers' Guide and Membership Directory for 1931. The publication presents a classified directory of New Orleans business, outlining in convenient form commodities made and sold in New Orleans, with the names of manufacturers and distributors. There is included also a list of local importers and exporters with a roster to date of the New Orleans Association of Commerce.

East St. Louis Survey.—The Chamber of Commerce of East St. Louis, Ill., has issued a booklet covering a survey of the city by the industrial committee of the Chamber, in an effort to arrange in logical order facts of value to the citizens and industrial leaders of the community and for those contemplating establishment of industrial plants in the middle West. The survey deals especially with transportation facilities, terminal facilities, electric power, water supply, fuel supply, distribution facilities, labor, and the diversity of industrial products of that area.

Tax-Free Municipality.—The Burns & McDonnell Engineering Company, Kansas City, Mo., is distributing a booklet devoted to the municipally owned power and light plant at Ponca City, Okla. This plant is equipped with four 1250 H. P. Nordberg Diesel engines made by the Nordberg Manufacturing Company, Milwaukee, and direct connected to 1125 KV-A, 2300 volts, 60 cycle General Electric alternating current generators. The generating equipment was made on the basis of competitive bids from plans and specifications prepared by Burns & McDonnell.

Vacuum Pump.—A new catalog on the "Condo-Vac" vacuum pump will soon be announced by the Chicago Pump Company, Chicago, Ill. The publication will show an accurate wash drawing in four colors of the interior of this pump, outlining the travel of the air, condensate and water through the pump. In the same catalog an announcement will be made of an "Automatic Alternator" for duplex vacuum pump, a development of the Chicago company.

Port and Terminal Charges.—The 1931 edition of Miscellaneous Series Report No. 1, "Port and Terminal Charges at United States Ports," has been issued by the Board of Engineers for Rivers and Harbors of the War Department, in cooperation with the United States Shipping Board. The volume

presents information relative to services and charges of the United States Government and local port authorities applicable to vessels, freight and passengers at United States ports, and in addition contains data regarding physical features and commerce of the ports.

Colloidal Graphite.—The Acheson Oildag Company, Port Huron, Mich., is distributing a booklet, "Colloidal Graphite—Its Properties, Uses and Advantages as a Lubricant," dealing comprehensively with lubrication problems and specifically with "Oildag" and "Aquadag," colloidal graphite lubricants, first introduced by the company a quarter of a century ago.

Industrial Directory.—The 1931-32 edition of MacRae's Blue Book, a comprehensive industrial directory of the United States and Canada, is now going to press. The publication, which also serves as a buying guide, presents seven industrial reference sections in one volume: No. 1, address and local distributors' section; No. 2, trade-name section; No. 3, index to classifications or finding list; No. 4, classified material section; No. 5, trade facilities section; No. 6, Canadian address section, and No. 7, Canadian classified section. It is published by MacRae's Blue Book Company, Chicago and New York.

Locomotive in Railroad Competition

From the Princeton University Press has been issued a booklet, "The Locomotive on the Railroads' Battlefield," the subject of an address April 14 by William C. Dickerman, president of the American Locomotive Company, New York, before Princeton University in the Cyrus Fogg Bracket Lectureship in applied engineering and technology. In a foreword Dean Arthur M. Greene, Jr., of the School of Engineering, points out that during the past decade new forms of transportation have made large advances into the territory of the railroads, and that these advances should be carefully considered although there is no fear, he says, of the final outcome. "The battle," says Mr. Dickerman, "is that against waste, against inefficiency, and against a constant menace of keener competition by other transportation agencies."

Mr. Dickerman's lecture centered around a series of sixteen graphical charts, prepared especially for presentation of the subject. Plate 1, was devoted to: Railroad Mileage and Locomotive Development; plate 2, Rolling Stock Development; plate 3, Railroad Operating Characteristics (Physical); plate 4, Railroad Operating Characteristics (Revenues and Taxation); plate 5, Transportation Agencies; plate 6, Territorial Grouping of Railroads; plate 7, Capital Expendi-

tures by Railroads; plate 8, Freight Service During Ten Years; plate 9, Gross Ton-Miles Per Train Hour; plate 10, Weight on Drivers vs. Starting Power; plate 11, Weight on Drivers and Capacity-Freight; plate 12, Weight on Drivers and Capacity-Passenger; plate 13, Long Engine Runs; plate 14, Average Age of Locomotives; plate 15, What Replacement Means, and plate 16, Factors Affecting Modern Railroad. On these data Dean Greene has suggested that studies in engineering and economics may be made in classroom and in research.

Big Deal in Mineral Lands

Columbia, Tenn.—A big deal just consummated by the Victor Chemical Works, Chicago, for the purchase of 2500 acres of mineral lands in Maury County gives promise that the mining of phosphate rock will soon become unusually active in this vicinity. The property is located on the Mt. Pleasant Southern Railway and extends from Porter's Chapel to Southport. Plans of the purchasing company for developing it have not been announced, but it is thought that extensive mining operations will be carried on. A companion deal was the purchase of the Mt. Pleasant Southern Railway by August Koch of Chicago, who is an official of the Victor Chemical Works.

POLLARD HEADS CENTRAL of GEORGIA RAILWAY

Richardson Becomes President of Ocean Steamship Company—C. E. Weaver Promoted

Savannah, Ga.—Directors of the Central of Georgia Railway have elected H. D. Pollard, Savannah, president to succeed the late A. E. Clift. This action is in accord with a recommendation of L. A. Downs, president of the Illinois Central Railroad, of which the Central of Georgia is a subsidiary. E. R. Richardson, vice-president and general manager of the Ocean Steamship Company, was named president of that company by its board of directors, also on the recommendation of the president of the Illinois Central, which operates the steamship company. C. E. Weaver, chief engineer of the Central of Georgia has been promoted to assistant general manager and chief engineer.

Owing to the deaths of Mr. Clift and Charles A. Peabody, two vacancies existed on the board of directors of each company. Mr. Pollard was elected director of the Ocean Steamship Company and Mr. Richardson was elected director of the Central of Georgia Railway. The other vacancy on each board was filled by the election of William Avery Harriman of New York, chairman of the board of W. A. Harriman & Co. Mr. Pollard has been connected with the Central of Georgia Railway since 1898 and Mr. Richardson has served the Ocean Steamship Company since 1900. Mr. Weaver's connection with the railroad has extended over a period of 15 years.

Southern Builders Supply Association

New Orleans, La.—The Southern Builders Supply Association, whose membership is open to building material merchants in the South, was recently reorganized with the following officers: Walter F. Jahncke, New Orleans, president; W. W. Fischer, Memphis, Tenn., vice-president, and John J. Voelkel, Sr., New Orleans, treasurer. Headquarters will be at 814 Howard street, New Orleans. The following chairmen of standing committees were appointed: Cement, Richard N. Hawkins, Birmingham; brick and clay products, Robert Hibbler, Chattanooga; lime, R. D. Conger, Jackson, Tenn.; metal lath and steel products, Frank D. Horton, Birmingham; plaster, E. S. Spencer, Jacksonville, Fla.; roofing, John D. Baker, Jacksonville; specialties, John G. Pope, Chattanooga, and membership, W. W. Fischer, Memphis.

North Carolina Mining Activities

Spruce Pine, N. C.—Henry Bailey of Penland, N. C., and H. E. Deneen of Spruce Pine, plan to establish a kaolin mining and refining plant near Bear Creek, where a large deposit of China clay will be worked to supply the plant, according to reports current here. Producing a major portion of the kaolin mined in the United States, the mines of North Carolina supply kaolin to local plants for refining, the output then being sent to Ohio and New Jersey to be made into various ceramic products.

Feldspar mining in the Spruce Pine

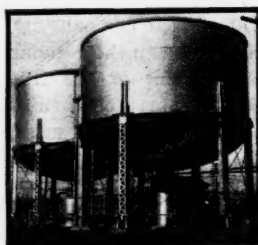
district continues at less than capacity, but it is reported that the Bon Ami Co., New York, which obtains a large amount of feldspar from local miners, will open a large deposit at the head of Crabtree Creek. It is understood also that W. S. Robinson, general superintendent of factory operations for the Bon Ami Company, has arranged with J. C. Pitman to conduct extensive mining operations on property owned by the company on Chalk Mountain, both for mica and feldspar production.

New York interests are said to have acquired deposits of cyanite, a new refractory material, in Yancey County and

also the same interests may announce plans soon for a kaolin plant on the Wiseman property in Avery County.

\$700,000 Court House

Clarksburg, W. Va.—Plans for a new \$700,000 court house to be erected here for the Harrison County Court, Maurice L. Loudon, clerk, are expected to be out for bids about July 15. The building will be 130 by 110 feet, 6 stories. Walker & Weeks, Cleveland, Ohio, are the architects and Carlston C. Wood, Clarksburg, associate architect.



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Elevated, flat-bottom and cylindrical steel tanks in either standard or special designs for the storage of liquids or solids. Steel plate work such as smokestacks, penstocks, creosoting cylinders and kilns. Please state capacity, location and (for elevated tanks) height to bottom when requesting quotations.

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New York.....3113 Hudson Terminal	Boston.....1510 Consol. Gas Bldg.
Cleveland...2216 Midland Bank Bldg.	Seattle.....4328 Smith Tower

B-196

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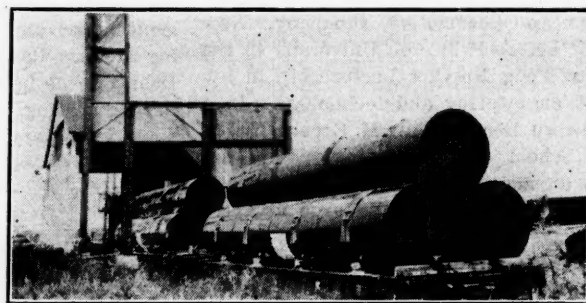
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LOUISVILLE — KENTUCKY

LIBBEY-OWENS LANDS BIG GLASS CONTRACT

Deal With General Motors May Involve \$50,000,000

Charleston, W. Va.—To meet an increased production demand resulting from a deal with General Motors Corporation to supply that company's glass requirements during the next seven years, the Libbey-Owens-Ford Glass Company plans to utilize its factory here, augmenting its force and perhaps expanding its plant facilities. All glass making facilities of General Motors have been purchased by the Libbey-Owens-Ford Company, including glass plants at Ottawa, Ill., of the National Plate Glass Company, subsidiary of General Motors. With these new plants and its present factories at Toledo, Rossford and Lancaster, Ohio; Shreveport, La., and Charleston, the Libbey-Owens-Ford company expects to be able to take care of the glass requirements of General Motors for the seven-year period, estimated to involve about \$50,000,000.

To Erect New Lumber Mill

Indiantown, Fla.—The Long Leaf Lumber Company, P. E. Hammons, president, whose sawmill was destroyed by fire on May 1, is having plans prepared for a new unit by Thrall & Shea, millwrights of Lake Charles, La., upon completion of which work will begin on a new mill. The boiler house, planer mill, dry kiln and all lumber in the storage yard were saved. Moreover, considerable material had already been cut in the woods, and in order to recover this timber the company is operating a number of small mills, and will continue to run its planing mill to dress the large stock of lumber in the yard.

The proposed new mill will cut around 75,000 feet daily. The company estimates that it has an eight or ten year supply of virgin long leaf yellow pine timber.

200-Mile Oil Pipe Line

Beaumont, Tex.—The construction of a 200-mile pipe line from the East Texas oil fields to a point on the Neches River south of Beaumont, with 60 miles of gathering lines, has been started by the Sun Oil Co., Philadelphia, Pa. The main line will be of 10 $\frac{3}{4}$ -inch pipe, while the gathering lines will be of various sizes. A total of 18,000 to 19,000 tons of pipe will be supplied by the Jones & Laughlin Steel Corporation, Pittsburgh, Pa., through the Norvell-Wilder Co., Beaumont. Five stations will be built along

the line, equipped with electrically driven centrifugal pumps, for handling a daily capacity of 45,000 barrels. The Mitchell-Stewart Construction Co., Dallas, Tex., and the Schmit Construction Co., Saukville, Wis., are contractors for the project, which is being built under the direct supervision of R. W. Pack, vice-president of the Sun Oil Co. at Beaumont, and W. C. Kinsolving, general superintendent of the line. Engineering work is being handled by engineers of the Sun Pipe Line Co.

Prevention of Machine Obsolescence

Economists have made estimates of the waste incurred by what is described as machine obsolescence, yet there have been few definite suggestions of means for avoiding the burden, or of determining the extent to which the condition exists. Age alone may not always be accepted as evidence that a machine is inferior. Obviously, the logical procedure is to determine the factors that enter into the valuation of any particular machine. To that end, the Union Special Machine Company, Chicago, emphasizes the system used in its own factory, believing the same methods can be applied advantageously by other manufacturers for betterment of mechanical equipment.

By the system employed, each individual machine or individual group of machines is provided with a complete pedigree which coordinates all the factors having a bearing on determination of the degree to which obsolescence exists. A chief essential is a machine equipment record card of a form recently copyrighted by the company. This card provides for listing the name of the machine manufacturer, the operation performed, serial number and type of machine, also serial numbers of duplicate machines where a group is involved. Following is an itemized list of factors for consideration, arranged in a form that facilitates recording results obtained through periodic surveys. These are thus designated:

Date of survey; general condition of machine (good, fair, or poor); date of purchase; purchase cost; per cent of production the machine is capable of maintaining as compared with latest type of equipment; quality of work (excellent, good or fair); and type designation of the newest machine. In detail, the condition of the machine is classified as to whether it should be changed, and estimated cost of the change, whether it must be repaired and estimated cost of repair, whether it must be overhauled, cost of overhauling, and the date recommended for overhauling.

\$4,700,000 LOCOMOTIVE FRAMES

Pennsylvania Railroad Awards Contracts for Chassis-Construction for 90 Engines

Orders have been placed by the Pennsylvania Railroad for the construction of the mechanical parts or chassis of 90 of the 150 electric locomotives for which the railroad recently ordered \$16,000,000 worth of electrical equipment. This newest order will involve an outlay of \$4,700,000 and covers driving wheels, axles, truck frame and cab and structural parts in which electrical apparatus will later be installed. Of the locomotives, 54 will be built by the Westinghouse Electric and Manufacturing Company at Eddystone, Pa.; 25 will be constructed by the General Electric Company at Erie, Pa., and 11 will be built in the Pennsylvania Railroad shops at Altoona, Pa. Deliveries are expected to begin not later than December of the current year and the entire consignment of 90 are expected to be ready for service by June, 1932. These locomotives are known as Class P-5, a heavy duty, high speed passenger unit 62 feet 8 inches long and weighing 375,000 pounds. Each will have a one piece cast steel main frame or bed. Beds for these and the remaining locomotives in the present program of 230 will be built by the General Steel Castings Corporation at their new plant at Eddystone.

Survey of Retail Management in Alabama

Managerial methods of Alabama retailers are to be studied in a survey undertaken by the Department of Commerce in cooperation with the University of Alabama and business interests of the state. Establishments in a number of different lines of trade in Tuscaloosa, Selma, Eutaw and Cullman are to be studied. It is believed that results of the survey will prove of value to merchants in cities and towns throughout the state as well as securing more profitable operations by merchants generally. Field work is expected to extend well into the summer.

\$15,000,000 Road Bonds

Baton Rouge, La.—Louisiana highway bonds in the amount of \$15,000,000 have been sold to a group of bankers headed by Harris, Forbes & Co., New York, at a price of 100.02 as 4 $\frac{1}{2}$ s. These bonds are a portion of a \$68,000,000 issue authorized last fall and make the second installment of \$15,000,000 sold this year.



AT THE COFFEE HOUSE THEY CALLED IT "HAMILTON'S JOURNAL"

In November, 1801, a group of merchants—headed by Alexander Hamilton—founded the New York Evening Post. So closely was Hamilton associated with this new venture that leading merchants called the paper "Hamilton's journal." ¶ Seventeen years before the establishment of this great newspaper, a group of merchants—headed by Alexander Hamilton—founded the Bank of New York, the City's first financial institution.

SINCE its founding in 1784, a policy of this bank has been to create a per-

sonal relationship between its customers and its officers. We are reluctant to change our personnel. It is a satisfaction to feel that such business friendships are permanent.

Moreover The Bank of New York and Trust Company is of a size to render an intimate banking service, both to customers having moderate accounts and to wealthy corporations, firms and individuals.

BANK of NEW YORK and TRUST COMPANY

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FINANCIAL NEWS

Bond Issues Proposed

Ala., Montgomery—Legislature, Committee on public roads and highways voted favorable report on proposed amendment to constitution for issuance of \$25,000,000 bonds for highways.

Ark., Dewitt—Arkansas County voted \$55,000 courthouse bonds; make arrangements at once for sale.

Ky., Madisonville—Hopkins County votes Aug. 1 on \$125,000 road and bridge bonds.

La., Amite—Tangipahoa Parish School Bd., C. C. Pittman, Supt., votes July 28 on \$110,000 bonds.

La., Bunkie—City, W. P. Bridenthal, Mayor, receives bids July 7 for \$40,000 paving bonds; \$500 denom.; interest not to exceed 6%; Thad Mantipty, Clerk.

La., Cameron—Cameron Parish Gravity Drainage Dist. No. 3 voted \$12,000 bonds. 5-21

La., Ruston—City, Mayor Charles C. Goyne, votes July 21 on \$180,000 bonds for gas pipe line construction.

Md., La Plata—Charles County, F. Willis Posey, Clerk, opens bids July 7 for \$23,000 school bonds.

Md., Rockville—City, J. Roger Spates, Mayor, opens new bids July 1 for \$50,000, 4½%, \$1000 denom. water and sewer bonds. 5-28

Miss., Laurel—Myrick Consolidated Public School District votes June 30 on \$10,000 school bonds; Geo. H. Snyder, Election Commr. 5-21

Miss., Saucier—Harrison County Bd. of Supervisors receives bids July 6 for \$20,000 Saucier Consolidated School District bonds. 6-18

Miss., Waynesboro—City defeated \$69,500 power plant bonds.

Mo., Branson—Branson Consolidated School Dist. voted \$20,000 bonds. 6-18

Mo., Jefferson City—State, Larry Brunk, State Treas., opens bids July 8 for \$5,000,000, 3½%, \$1000 denom. road bonds.

Mo., Webb City—City, L. O. Walker, Clk., open bids July 6 for \$13,500 funding bonds.

N. C., Greenville—City votes July 14 on \$100,000 gas plant purchase bonds.

N. C., High Point—City sell \$750,000 bonds June 30 under direction of Local Government Comsn.

N. C., Shelby—Bd. of Aldermen authorized sale of \$20,000 tax anticipation notes.

Okla., Arnett—Ellis County voted \$1,000,000 road bonds.

S. C., Charleston—Charleston County, Wm. J. Leonard, Treas., receiving bids for \$24,000 bonds.

S. C., Charleston—City, W. S. Smith, City Treas., opens bids July 1 for \$12,000 4½% paving bonds.

S. C., Greenville—Greater Greenville Sewer Comsn., E. D. Fry, Supt., sell more than \$500,000 sewer bonds; J. Wilber Hicks, chm. special committee appointed by Chamber of Commerce to assist; \$745,000 bonds authorized, including \$525,000 Parker District, \$135,000 Augusta road and \$25,000 Northgate.

Tenn., Memphis—City votes July 7 on \$1,300,000 improvement bonds.

Tenn., Nashville—Gov. Henry H. Horton recommended issuance of \$27,800,000 bonds for road and bridge construction and \$9,000,000 for refunding.

Tex., Beaumont—Jefferson County votes in 45 or 60 days on \$150,000 bonds for acquiring site and erecting or remodeling court house at Port Arthur.

Tex., Beaumont—City, J. H. Millard, City Mgr., plans calling election in 30 days on \$900,000 street bonds.

Tex., Fort Worth—City votes July 21 on \$100,000 airport bonds.

Tex., Goose Creek—City votes July 6 on \$118,000, 5½% funding bonds.

Tex., Marlin—Falls County Comms. Court call election July 11 in New Salem Road District No. 7 on \$12,000 bonds.

Tex., Palo Pinto—Palo Pinto County Road Dist. No. 3, J. W. Birdwell, County Judge, defeated \$150,000 road bonds. 6-11

Tex., Refugio—City, J. O. West, Mayor, plans voting on paving bonds.

Va., Rustburg—Campbell County defeated \$125,000 water bonds.

W. Va., Charleston—Kanawha County voted to refund Elk District road bond issue by selling \$398,000 bonds to W. C. Allyn & Co., Chicago, at par and accrued interest and premium of \$1990; 5%.

Bond Issues Sold

Ark., Little Rock—Twelfth Street Improvement District, John D. Shackelford, Atty., Glover Bldg., sold \$66,000 bonds to M. W. Elkins & Co. at \$46,100; 5%; A. C. Shipp, H. E. Wooten, Ed Kanis, Comms.

La., Baton Rouge—State of Louisiana sold \$15,000,000 highway bonds as 4½s at 100.02 to syndicate headed by Harris, Forbes & Co., New York, and including Lehman Bros., National City Co., Chase Securities Corp., Stone & Webster & Blodget, Inc., Kean, Taylor & Co., Kountze Brothers, Eldredge & Co., L. F. Rothschild & Co., R. W. Pressprich & Co., H. L. Allen & Co., all New York; Ames, Emerich & Co., Lawrence Stern & Co., Continental Illinois Co., First National Old Colony Corp., all Chicago; Mississippi Valley Co., St. Louis; Estabrook & Co., H. L. Allen & Co., Boston; Stranahan, Harris & Co., Toledo; Hibernia Securities Co., New Orleans; R. H. Moulton & Co., Los Angeles; Edward Lowber Stokes & Co., Philadelphia; Wells-Dickey Co., Minneapolis; Stern Brothers & Co., Kansas City; Schaumburg, Rehnann & Osborne, Darby & Co., and seven Louisiana banks; issue is second portion of \$68,000,000 authorized for highway purposes, first \$15,000,000 being sold in February. 5-21

La., Houma—Terrebonne Parish Consolidated School District No. 1, A. R. Viguerie, Pres., sold \$160,000 4½% school bonds at par to First National Bank, Shreveport. 5-21

La., Natchitoches—City, G. H. Pierson, Commr. of Finance, sold \$55,000 public utility bonds to First National Bank, Shreveport, at par and accrued interest. 6-11

Md., Centerville—Queen Anne's County sold \$20,000 school bonds to Wellepp-Bruton & Co., Baltimore.

Md., Laurel—City sold \$10,000 4½% improvement bonds to John P. Baer & Co., Baltimore, at 101.069.

Mo., St. Joseph—Buchanan County, Oscar F. Lollis, Clerk, sold \$313,000 5% tax anticipation notes to Alexander, McArthur & Co., and Fidelity National Corp., both Kansas City. 6-4

N. C., Charlotte—Local Government Comsn. sold \$130,000 notes at 3¼% and \$330 premium to Commercial National Bank, Raleigh, as agent for Mason, Hagen, Inc., Richmond, Va.

N. C., Kinston—Local Government Comsn. sold \$130,000 Kinston bonds at premium of \$125 to A. C. Allyn & Co., Chicago, Ill.; 5¼%.

N. C., Yanceyville—Local Government Comsn. sold \$4000 6% notes of Caswell County at par to R. Graves, Sterling.

N. C., Wadesboro—Local Government Comsn. sold \$85,000 school funding and \$20,000 road funding bonds of Anson County at \$105.975 to Glaswell, Vieth and Duncan, Davenport, Iowa; 5¼%.

Tenn., Benton—Polk County, A. R. Arn, Clerk, sold \$85,000, 5% sinking fund bonds to Joseph, Hutton, Estes & Co., Nashville.

Tenn., Clarksville—City sold \$38,000 water works improvement bonds to American National Co., Nashville, as 4½s, on a 100.31 basis.

Tenn., Lawrenceburg—Lawrence County sold \$36,000 school bonds at premium of \$200 to American National Co., Nashville; 5%.

Tex., Dumas—Dumas Independent School District sold \$150,000 bonds to J. H. Phillips Investment Co., Houston.

Tex., Pampa—Gray County, R. C. Wilson, Auditor, sold \$300,000 road bonds for \$301,000 to Brown-Crummer Co., and Branch-Middlekauff Investment Co., Wichita, Kansas; \$1000 denom., 5%. 6-11

Tex., Port Arthur—City sold \$300,000 sea wall bonds to W. Horace Williams Co., New Orleans, La., at par and accrued interest. 6-18

Va., Hampton—Hampton School Bd., Robert M. Newton, Div. Supt. of Schools, sold \$110,000 4½% bonds to Bank of Hampton; sold \$39,000 4¼% Wythe school district bonds to Thompson, Ross & Co., Chicago, Ill.

Va., Lynchburg—City, R. W. B. Hart, City Mgr., sold \$459,000, 4% public improvement bonds to State Planters Bank & Trust Co.,

Richmond; First National Old Colony Corp., New York, and Auchinloss, Parker & Redpath, Washington, at \$453,532.50. 6-11

New Financial Corporations

N. C., Ayden—First National Bank organized with capital and surplus of \$50,000 to take over old National Bank of Ayden; J. R. Turnage, Pres.; A. Frowe, Cashier.

Okla., Woodward—State Bank of Supply and State Bank of Woodward consolidated as Bank of Woodward.

Tenn., Harriman—First National Bank, formed by consolidation of First National and Harriman National banks; capital \$100,000; resources \$1,250,000; G. W. Carson, Pres.

Tenn., Nashville—City Loan Bank, 202 Stahlman Bldg., chartered with capital stock of \$100,000; Alton J. Johns, C. A. Bramblett.

First National Bank of Meridian, Miss., successor to Meridian First National Bank, opened; W. D. Cook, active vice-president.

Guaranty Bank & Trust Co., Lexington, Ky., reopen about July 1.

Earnings Show Increase

Gross earnings of the Louisville Gas & Electric Company, subsidiary of the Standard Gas & Electric Company, Chicago, for 12 months ended April 30, 1931, amounted to \$10,728,525, as compared with \$10,387,368 for the 12 months ended April 30, 1930. Net earnings amounted to \$5,676,951, as against \$5,356,008.

Better Business Prospects

After a study of business conditions on an eight weeks' trip through the South and West, Willoughby M. McCormick, president of McCormick and Company, world's largest spice and extract manufacturers, has returned to Baltimore, confident that this fall will see a great change in business and that for the better.

Mr. McCormick bases his belief on the fact that bankers and merchants all through the South and Middle West are much more optimistic, and the feeling in general is toward a gradual increase in business as the frozen loans burdens are lifted. In Alabama, conditions have shown marked improvement, especially around Birmingham. In Houston, also, the trade were optimistic, and notwithstanding the low price of cotton and oil, business is considered to be holding its own remarkably well. In fact, proceeding West conditions gradually improved, especially in comparison with those in the East.

\$5,000,000 Highway Certificates

Columbia, S. C.—Governor Ibra C. Blackwood and J. H. Scarborough, state treasurer, open bids July 1 for the purchase of \$5,000,000 South Carolina state highway certificates of indebtedness, the interest rate to be named by the bidder. The certificates will mature serially from 1949 to 1953, inclusive.

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COMMERCIAL PAPER

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Baltimore, Maryland

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Another Step in Lakes-to-Gulf Waterway

A new river and rail terminal constructed at a cost of approximately \$400,000 was dedicated at Peoria, Ill., on June 15 and turned over to the Inland Waterways Corporation, government controlled agency, as the first fleet of barges tied up at the wharf and began unloading a cargo from St. Louis, Memphis and New Orleans. The completion and dedication of the Peoria pier marks an advance in plans of the Government to establish a waterway from the Great Lakes to the Gulf of Mexico, which will "place the Mississippi Valley on the sea coast and lift the economic load placed on the midcontinent by the Panama Canal."

Secretary of War Patrick J. Hurley, one of the speakers at the dedicatory exercises, stressed the point that the new service links Peoria with New Orleans and Pittsburgh and the Twin Cities, and that Kansas City early in 1932 and Chicago early in 1933 will be on the route, upon the completion of the project, which will provide transportation over 3000 miles of trunk lines. The terminal is at the water's edge and is provided with railroad tracks at the side. It is said that nine railroads have arranged to utilize the facilities through joint river and rail rates, and Peoria expects to handle much bulk material from the Chicago metropolitan area, which will be delivered at the terminal by rail and transhipped by barges to New Orleans, St. Louis, Pittsburgh, St. Paul and intermediate points. General Thomas Q. Ashburn, Washington, D. C., is at the head of the Inland Waterways Corporation.

For Employment Stabilization

General suggestions for stabilizing employment, from several concerns in various industries, are quoted by the Baltimore Municipal Commission on Employment Stabilization in a report and analysis of its investigations. Seasonal unemployment is discussed and the factors causing, respectively, cyclical, technological and casual unemployment.

"Our investigation has shown that no manufacturing concern has been able to grapple effectively with the problem of cyclical disturbance of business which has not first learned how to deal successfully with seasonal fluctuations in the demand for its products," says the report.

Suggestions are offered by the Black & Decker Manufacturing Company, Towson, Md., electric tools; Maryland Car Wheel Company, Henry A. Kries & Sons Company, heating, ventilating and power plant equipment; Morris & Co., clothing;

McCormick & Co., Inc., teas and spices; M. S. Levy & Co., Crosse & Blackwell, Inc.; Hynson, Westcott & Dunning, all of Baltimore.

Cotton Bagging for Cotton Bales

Textiles Incorporated, Gastonia, N. C., has joined a group of manufacturers who allow extra weight on cotton bales covered with standard cotton bagging, and has adopted seven pounds as such allowance. General adoption of this policy, it is estimated, would promote the use of 500,000 bales of cotton for bagging for this year's crop.

The Manville-Jenckes Company, Gastonia, is manufacturing a bagging at 12 ounces per lineal yard, 45 inches in width, and the American Mills, Bessemer City, N. C., are putting out a bagging weighing about 10½ or 11 ounces per lineal yard, 42 inches in width.

Southern Federal Building Projects

Washington, D. C.—Among Southern building projects involved in immediate plans of the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, are the following: \$60,000 post office building at Monroe, Ga., for which bids are opened July 7; \$65,000 post office at West Point, Va., bids July 8; \$60,000 post office at Manassas, Va., bids July 8, and a \$60,000 post office at Waynesboro, Ga., bids July 7.

The Navy Department has a low bid at \$246,666 from Worsham Bros., Knoxville, Tenn., for barracks and boiler plant at the Naval Air Station, Anacostia, near Washington; Constructing Quartermaster, Fort Myer, Va., has low bid of \$86,900 from Brooklyn & Queens Screen Manufacturing Co., Brooklyn, N. Y., for 4 double company officers' quarters and garages, and at \$82,470 for 6 double non-commissioned officers' quarters and garages; the Treasury Department has low bid of \$303,848 from Algernon Blair, Montgomery, Ala., to remodel and extend post office at Shreveport, La., and low bid of \$8531 from the S. Heller Elevator Co., Milwaukee, Wis., for an elevator, and a low bid of \$514,900 from Robert E. McKee, El Paso, Tex., to remodel and extend post office and courthouse at Houston, Tex.

A contract has been awarded to the Otis Elevator Co., Washington, at \$10,664, for a passenger elevator in a new \$275,000 post office and court house at Rock Hill, S. C., for which the Batson-Cook Co., Inc., West Point, Ga., has general contract.

Papermaking

"The future of paper making is in the South," says the Industrial Bulletin issued by Arthur D. Little, Inc., chemical engineers of Cambridge, Mass. Under the heading, "The Trek of Papermaking," the June number of the Industrial Bulletin says:

"Within the last few days there have come into our possession sections of the trunks of three short-leaf loblolly pine trees grown in Louisiana which have momentous significance for the paper industry.

"One of these sections came from a tree only 13 years old, but it had a diameter of 17¼ inches. Both the other trees were 12 years old, but their respective diameters were 12¼ and 10½ inches. Since bolts of pulp wood usually range in diameter from 6 to 10 inches these sections mean that it is possible, in favorable locations in the South, to grow pulp wood in 8 or 10 years, whereas 25 to 30 years is required in the North to bring a spruce tree to pulpwood size.

"Incidentally, it is interesting to note the remarkable difference in the rate of growth on the north and south sides of these loblolly sections. Fifty-nine per cent of the total diameter of the 13-year-old tree was on the south side, and 61 and 57 per cent in the case of the other two trees.

"Old-time papermakers used to tell us that Southern woods were unfit for papermaking. Today there are 86 paper and pulp mills in the South with an annual capacity in excess of a million and a quarter tons of paper and boards. At present most of the product is kraft paper made from yellow pine, of which great quantities are still available, but there are immense stands of other woods, as gum wood, tupelo, cypress, and chestnut, which have been shown to be suitable for other sorts of paper. Arthur D. Little, Inc., in cooperation with Southern lumber interests, has demonstrated that excellent newsprint can be made from yellow pine and gum wood. Other new methods are rapidly extending the papermaking range of these and other Southern woods.

"With Northern and Canadian supplies already high in price, the South not only offers cheap pulp wood in vast amount, but also provides the assurance that when necessity arises a perpetual supply of loblolly pine, grown as a crop, will be available.

"The future of papermaking is in the South."

Gas Heat for Big Hotel

Macon, Ga.—Officials of the Hotel Dempsey and the Macon Gas Co. have signed a contract for one of the largest hotel gas heating installations in the South, according to Charles Leech, manager of the gas company. The gas mechanism will be automatic, applying heat to two 150-horsepower boilers for furnishing steam and hot water for the present hotel and a 9-story annex now being built.

Bids close July 6, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 11, 1931.—**SEALED BIDS** in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 6, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Madison, Ga. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 7, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 12, 1931.—**SEALED BIDS**, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 7, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Sandersville, Ga. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 7, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 11, 1931.—**SEALED BIDS** in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 7, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Thomson, Ga. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications not exceeding three sets may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 26, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 1, 1931.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 26, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, court house, custom house, etc., at Key West, Fla. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and Specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 30, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 11, 1931.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 30, 1931, for furnishing all labor and materials and performing all work for new brass water piping at the U. S. custom house, appraisers' stores and court house, Wilmington, N. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 20, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 10, 1931.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 20, 1931, for furnishing all labor and materials and performing all work for additions to heating system and electrical changes in the U. S. post office and court house, New Orleans, La. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 14, 1931.

Louisiana Highway Work

Baton Rouge, La.

Sealed proposals for the construction of the following projects will be received by the Louisiana Highway Commission, Room No. 614 Louisiana National Bank Building, Baton Rouge, Louisiana, until 9:45 A. M. on Tuesday, July 14, 1931. Proposals will not be received after this hour. At 10:00 o'clock A. M. of the same day and date they will be publicly opened and read in the Chamber of the House of Representatives in the State Capitol Building:

(BOND) PROJECT NO. 1605—RING-GOLD-EAST AND WEST HIGHWAY—Located in Bienville Parish—Routes 13 and 417—Length 3.2 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$1.50.

(BOND) PROJECT NO. 1606—ARCA-DIA-NORTH AND SOUTH HIGHWAY—Located in Bienville Parish—Route 12—Length 2.1 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$1.50.

(BOND) PROJECT NO. 2506—LOGANS-PORT-LONGSTREET HIGHWAY—Located in De Soto Parish—Route 38—Length 4.7 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$1.50.

(BOND) PROJECT NO. 2508—MANS-FIELD-SODUS HIGHWAY—Located in De Soto Parish—Route 1—Length 3.1 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$1.50.

(BOND) PROJECT NO. 5005—CADDOR-RIVER PARISH LINE-GRAND BAYOU HIGHWAY—Located in Red River Parish—Route 20—Length 11.4 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$2.50.

(BOND) PROJECT NO. 5006—HANNA-GRAND BAYOU HIGHWAY—Located in Red River Parish—Route 20—Length 11.2 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$2.50.

(BOND) PROJECT NO. 5209—SODUS-NORTH AND SOUTH HIGHWAY—Located in Sabine Parish—Route 1—Length 3.5 miles—Width 18'—Type Portland Cement Concrete Pavement and other work in connection therewith—Charges for plans, \$1.50.

Full information and proposal forms are available at the offices of the Highway Commission at Baton Rouge. Plans and specifications may be inspected there or will be furnished upon payment of amount specified above (not to be refunded).

HARRY B. HENDERLITE,
O. K. ALLEN, Chairman.
Louisiana Highway Commission.
State Highway Engineer.

Bids close July 9, 1931.

Delaware Highway Work

Dover, Del.

Sealed proposals will be received by the State Highway Department, at its office, Dover, Del., until 2:00 o'clock P. M., Eastern Standard Time, July 9, 1931, and at that place and time publicly opened, for contracts involving the following approximate quantities:

CONTRACT 156
PEARSON'S CORNER-MOORE'S CORNER
5.52 MILES

6 Acres Clearing
5 1/4 Acres Grubbing
25,000 Cu. Yds. Excavation
9,000 Cu. Yds. Borrow
5,500 Tons Broken Slag Base Course
180 Cu. Yds. Class A Concrete
14,000 Lbs. Reinforcement
800 Lin. Ft. 15 in. Corr. M. Pipe
130 Lin. Ft. 15 in. R. C. Pipe
90 Lin. Ft. 18 in. R. C. Pipe
190 Lin. Ft. 24 in. R. C. Pipe
100 Lin. Ft. 30 in. R. C. Pipe
80 Lin. Ft. 36 in. R. C. Pipe
7,000 Lin. Ft. Wood Shoulder Curb

CONTRACT 193
PRIMEHOOK NECK ROAD, 6.37 MILES

3 Acres Clearing
3 Acres Grubbing
18,000 Cu. Yds. Excavation
8,500 Cu. Yds. Borrow
6,500 Tons Broken Slag Base Course
200 Cu. Yds. Class A Concrete
8,500 Lbs. Reinforcement
18,000 Lbs. Structural Steel
600 Lin. Ft. 15 in. Corr. M. Pipe
360 Lin. Ft. 15 in. R. C. Pipe
70 Lin. Ft. 18 in. R. C. Pipe
70 Lin. Ft. 24 in. R. C. Pipe
40 Lin. Ft. 30 in. R. C. Pipe
3,000 Lin. Ft. Wood Shoulder Curb
1,400 Lin. Ft. Timber Piling
3 M. ft. BM Sheet Piling

CONTRACT 196
GRAVEL SURFACING, NATIONAL
GUARD CAMP

800 Cu. Yds. Borrow
2,000 Cu. Yds. Gravel Surfacing

CONTRACT 197
COTTON PATCH HILLS-INDIAN RIVER
INLET, 1 MILE

3,000 Cu. Yds. Excavation
1,000 Cu. Yds. Borrow
2,500 Cu. Yds. Gravel Surfacing
80 Lin. Ft. 16 in. C. I. Pipe
40 Lin. Ft. 24 in. C. I. Pipe

CONTRACT 198
GEORGETOWN SIDEWALKS, 1200 FT.

200 Cu. Yds. Excavation
6,000 Sq. Ft. Cement Concrete Sidewalk
1,000 Lbs. Catch Basin and Drop Inlet
Castings
40 Lin. Ft. 15 in. R. C. Pipe

Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

In the employment of labor, preference shall be given to residents of the State of Delaware.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the construction of State Highway Contract No."

The Contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

STATE HIGHWAY DEPARTMENT,

Bids close July 7, 1931.

Electric Light Plant

Ocala, Fla.

NOTICE is given that City Council, Ocala, Florida, on July 7th, 1931, at 8 P. M., will consider sealed proposals for furnishing and installing machinery in its Electric Light Plant. The costs thereof to be paid out of savings and/or earnings of plant.

Right is reserved to reject any and all proposals. If interested write

J. R. MARTIN, City Manager.

Bids close June 30, 1931.

Maryland Highway WorkDEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION**NOTICE TO CONTRACTORS**

Baltimore, Md.

SEALED PROPOSALS for building four sections of State Highway as follows:
Baltimore City, Contract No. BC-106-74—One section of State Highway along Walther Avenue from Southern Avenue to Hamilton Avenue, a distance of 0.58 miles (Sheet Asphalt).

Calvert County, Contract No. C-46-84—One section of State Highway along the Coster Road from Frazier toward the Patuxent River, a distance of 1.0 mile and from Solomon's Island Road toward Dowells, a distance of 1.50 miles, total 2.50 miles (Gravel).

Calvert County, Contract No. C-48-84—One section of State Highway from the State Road at Stokely to Weems Corner, a distance of 2.08 miles (Gravel).

Caroline County, Contract No. Co-70-22, Federal Aid Project No. 238 and 218-B—One section of State Highway along the Andersontown-Hickman Road from the end of contract No. Co-58 to the Delaware State Line at Hickman, a distance of 2.11 miles and along the Andersontown-Woodenhawk Road from the end of contract No. Co-58 to the Delaware State Line, a distance of 2.72 miles, total 4.83 miles (Concrete) will be received by the State Roads Commission at its offices, Federal Reserve Bank Building Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 30th day of June, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 16th day of June, 1931.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close July 1, 1931.

Paving

Easton, Md.

Sealed proposals will be received by the Mayor and Council of Easton, at their office in Easton, Maryland, at 2.30 P. M. Wednesday, July 1st, 1931, for paving with concrete approximately fifteen hundred square yards (1500 sq. yds.) of roadway on South Street, in the Town of Easton, Maryland.

Contract, specifications, plans and blank proposals may be obtained from the Town Engineer upon payment of Two Dollars (\$2.00).

A certified check in the sum of Two Hundred Fifty Dollars (\$250.00) must accompany each bid.

The Mayor and Council reserve the right to reject any or all bids.

RALPH A. TOWNSEND,

Town Clerk.

E. G. KASTENHUBER, JR.,
Town Engineer.

Bids close July 17, 1931.

Excavation for Drainage**NOTICE TO CONTRACTORS**

Birmingham, Ala.

Sealed proposals will be received by the undersigned until ten o'clock, a. m., Friday, July 17, 1931, for certain earth and rock excavation which is proposed to be done by the City of Birmingham on Section Two of Valley Creek drainage project (from 7th Street, Southwest, to 18th Street, Southwest).

The approximate principal quantities being as follows. 110,000 cubic yards earth excavation and 37,000 cubic yards rock excavation.

Specifications may be obtained and plans examined at this office. The right is reserved to reject any or all proposals.

A. J. HAWKINS, City Engineer.

Bids close June 29, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 1, 1931.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 29, 1931, for furnishing all labor and materials and performing all work for plumbing and heating changes at the U. S. post office, Jellico, Tenn. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 14, 1931.

Sanitary Sewer System

Tuscaloosa, Ala.

Sealed proposals will be received by the Board of City Commissioners of the City of Tuscaloosa, Alabama, until 10 o'clock A. M. Tuesday, the 14th day of July, 1931, and then publicly opened, for the construction of a sanitary sewer system. Following are the approximate quantities:

23,946 Linear Feet 30 Inch Sewer Pipe.
832 Linear Feet 24 Inch Sewer Pipe.
10,638 Linear Feet 21 Inch Sewer Pipe.
91 Linear Feet 21 Inch Sewer Pipe Under Railroads.
4,568 Linear Feet 18 Inch Sewer Pipe.
10,027 Linear Feet 15 Inch Sewer Pipe.
9,763 Linear Feet 12 Inch Sewer Pipe.
288 Linear Feet 12 Inch Sewer Pipe Under Railroads.
10,923 Linear Feet 10 Inch Sewer Pipe.
787 Linear Feet 8 Inch Sewer Pipe.
168 Linear Feet 24 Inch Cast Iron Pipe.
16 Linear Feet 21 Inch Cast Iron Pipe.
32 Linear Feet 18 Inch Cast Iron Pipe.
48 Linear Feet 15 Inch Cast Iron Pipe.
188 Linear Feet 12 Inch Cast Iron Pipe.
352 Linear Feet 10 Inch Cast Iron Pipe.
70 Manholes.
2 24x6 Inch Cast Iron Tees.
2 6 Inch Valves.
10 Acres Clearing and Grubbing.
5,000 Feet E. M. Lumber in Place.
100 Cubic Yards Earth Excavation.
10 Cubic Yards Class C Concrete.
10 Cubic Yards Class B Concrete.

Proposals must be made out on the regular form of proposals and must be accompanied by a cashier's check or a certified check, drawn to the order of the City of Tuscaloosa, or a bidder's bond in the sum of \$2500.00 as a guarantee that the successful bidder will make bond and enter into a contract for the execution of the work in accordance with the terms of his proposal.

Copies of the specifications may be obtained from W. H. Nicol, City Engineer, Tuscaloosa, Ala.

The right is reserved by the City to reject any or all bids.

NORFLEET HARRIS,

President of the Board of Commissioners, City of Tuscaloosa, Alabama.

Bids close June 30, 1931.

Fire Pump and Oil Engine

Leland, Miss.

Sealed bids will be received up to 7.00 P. M. Tuesday, June 30th, 1931, at the office of the City Clerk of Leland, Mississippi, on one Oil Burning Engine of approximately 600 horsepower and one 1000 gallon, one hundred pounds pressure, fire pump, with dual drive. Plans and specifications can be obtained from the City Clerk on application.

MARY P. JOHNSON, Clerk.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

GOLD MINE for sale that has Government assays that run as high as \$100.00 per ton, over 600 acres.

H. G. LOVE, Hendersonville, N. C.

**CEDAR
BEST SEA ISLAND CEDAR
FOR SALE**EDISTO BEACH, INC.,
Law Range, Sumter, S. C.**TIMBER AND TIMBER LAND**

FOR SALE about 50 acres oak timber in the Shenandoah Valley near Winchester, Va.
CHAS. M. PIDGEON,
2103 K St., N. W., Washington, D. C.

FARM AND TIMBER LANDS

THE FOLLOWING TRACTS of land in North Florida are offered for less than they are worth for the purpose of liquidation. All well timbered with young long leaf pine.

18,000 acres good land at \$2.00 per acre.
11,000 acres at \$2.50 per acre.

440 acres at \$3.00 per acre.

F. L. GIBSON,
Thomasville, Ga.**Rates, Terms and Conditions**

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line

300 lines 26c a line

500 lines or more 25c a line

TERMS: For transient advertising cash with order; check, postoffice or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS. No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES**SAND AND GRAVEL**

SANDY OVERBURDEN two to five feet covers 320 acres solid bed best type commercial gravel 12 to 80 ft. stratum. Two railroads, 43 miles Houston, 50 cent rate, 50 miles road around pit to concrete now. \$75 acre. Terms.

M. JACKSON, Cleveland, Texas.

FARM, FRUIT AND TRUCK LANDS**VIRGINIA**

1,100 ACRES IN VIRGINIA, one hour by automobile west of Richmond. Gently rolling land, creek through center, much valuable growing wood and timber, 4 room hunting lodge, \$8,000. FRANK H. COX, Ashland, Va.

VIRGINIA ORCHARD of 25,000 bearing trees. Estimate for this season 50,000 barrels apples. Three seasons should return investment. Splendid present management available to purchaser. Write JAMES L. MARTIN, INC., Lynchburg, Va.

BUSINESS OPPORTUNITIES

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

SALES, Consolidations, Mergers of Industrial properties, Manufacturing plants. Twenty-five years successful negotiating. HARWELL & GARDEN, Comer Bldg., Birmingham, Ala.

I KNOW TEXAS—
Unlimited Opportunities In
Manufacturing—Mining—Oil—
Write Me
A. R. ANDERSON, Box 2551, Dallas.

MANUFACTURERS—Write for our FREE Classification Sheets of Inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 578 Enright, St. Louis, Mo.

MANUFACTURING PLANT FOR SALE: On account of ill health of owner, a plant manufacturing Flavoring Extracts and Grocers' Drugs in own building. This business has grown steadily each year and has shown good gain this year. Established for 18 years. No. 9112, Manufacturers Record.

WANTED—Bids on manufacturing two lines of agricultural implements, rapid sellers and good profit. Must have well equipped shop, capable of handling grey iron and aluminum castings, and a small amount of wrought-iron work. P. O. Box 448, Jacksonville, Fla.

BIG BARGAIN—For Sale, an up-to-date newspaper and job plant; cost \$8,000, for sale at \$3,500 and terms on part. Good field, good roads, schools, citizens, etc. Worth coming to see. Reasonable rent, waterworks and electric lights and power. For full particulars write. No curious need bother. Address G. B. TERRELL, Neon, Ky.

MOVING AHEAD

Parkersburg has worked out of the depression. Diversified industry did it. Locate your factory here at the gateway to the Central West and South.

BOARD OF COMMERCE.
Parkersburg, West Virginia.

INDUSTRIAL SURVEYS

ENGINEERING REPORTS on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

TECHNICAL SERVICE CO.,
Woolworth Building New York City

INDUSTRIES WANTED

WANTED—Manufacturing plants to locate at Wardsville, W. Va. Electricity, good water, cheap labor, railroad facilities, good highway, beautiful and healthful mountainous section. Write Board of Trade, Wardsville, W. Va.

INDUSTRIAL PLANTS

YOUR DOLLAR'S WORTH.

We can offer you now one of the most attractive Cabinet and Furniture Factories in the South; labor and materials no obstacle; served by splendid railroad facilities as well as National Highway; 29 acres land, several tenement houses; good machinery; has appraised value of approximately \$150,000 without stock. Unusual circumstances allow us to offer at \$85,000, with 1/2 cash, balance 1, 2 and 3 years. If interested all facts available.

PAGE-STURGILL REALTY CORP.,
Bernard Thomas, Repr.,
1201 Colonial National Bank Building,
Roanoke, Virginia.

FACTORY BUILDINGS

750 H.P. WATER POWER and about the same Steam Power. Factory must be sold immediately at sacrifice, containing 253,000 square feet of floor space; 59 miles from N. Y. City; water and rail transportation. Full particulars upon request.

LOEB & SCHOENFELD CO.,
1123 Broadway, N. Y. C.

FACTORY SITES

TWO AND ONE-QUARTER MILES railroad frontage industrial sites for sale at Baton Rouge. Southern Land and Investment Company, Baton Rouge, La.

WEST VIRGINIA FACTORY SITE

Adjoining town. Along with good water power electric plant. Also fuel oil auxiliary for emergency use. On railroad siding. Will lease or sell. Prices reasonable. Development desired. Will offer inducements. Address No. 9097, care Manufacturers Record.

PATENT ATTORNEYS

PATENTS—Booklet free. Highest references. Best results. Promptness assured. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

PAUL B. EATON, Patent Attorney
1408-R Johnston Bldg., Charlotte, N. C.
314 McLachlen Building, Washington, D. C.
417 Wachovia Bldg., Winston-Salem, N. C.

FREE "PATENT PARTICULARS"
Sterling Buck, over 23 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 892, National Press Building, Washington, D. C.

REPRESENTATIVES WANTED

WE MAKE Water Conditioning Chemicals and desire to communicate with men now active, calling on the power trade or handling boiler room specialties. Work is highly remunerative. Address No. 9060, care of Manufacturers Record.

MEN WANTED who sell fire appliances, to handle a Gasoline Non-Explosive safety valve for use on all gasoline tanks and a line of one and five gallon Non-Explosive gasoline cans.

EMERSON ENGINEERING CORP.,
Alexandria, Va.

SITUATIONS WANTED

CONSTRUCTION SUPERINTENDENT 15 years experience on paving, excavation, sewers, sewage disposal, waterworks, filter plants. Graduated civil engineer. Good organizer, estimator. Address No. 9114 care of Manufacturers Record, Baltimore, Md.

BUILDING CONSTRUCTION SUPERINTENDENT, with wide experience in the South on public and private work, desires position with a live Construction Company who can use this experience and who will appreciate results; best of references. No. 9113, care of Manufacturers Record.

MEN WANTED

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty-one years. Send only name and address for details.

R. W. BIXBY, INC.,
103 Downtown Bldg. Buffalo, New York

MACHINERY AND SUPPLIES

FOR SALE motor-generator, Westinghouse 11 h. p., 3 phase, direct coupled to 7 K. W. SNIDER ELEC. CO., 1626 So. Broadway, St. Louis, Mo.

WILLIAMS PATENT GRINDER (Infant), complete with pneumatic system, pipes, etc., very cheap. Used only a few hours. Engineering Company, Tenth & Carroll, St. Louis, Mo.

DEEP WELL PUMP FOR SALE

One A. D. Cook Double Action Type 1L 45 Gal. per minute Deep Well Pump, with or without Howell Red Band 7 1/2 H.P., 1200 R.P.M. Motor and starter, now in daily service. SUPERINTENDENT WATER WORKS, Inman, South Carolina.

14"x6' LEBLOND LATHE, Quick change	\$300.00
36"x18' Field Lathe	700.00
20"x14' Reed Lathe, Taper attachment	275.00
No. 1 1/2 Valley City Milling Machine	300.00
24" Cincinnati Shaper, Back Geared	700.00
23" Rockford Drill Press	125.00

Send us your inquiries. Secure our catalog. CINCINNATI MACHINERY & SUPPLY CO., 25 West 2nd St., Cincinnati, Ohio.

MACHINERY AND SUPPLIES WANTED

MODERN ELECTRIC or hydraulic veneer press, 4'0"x8'0". Plate drier, like size. Horizontal gang borer. Address No. 9115 care of Manufacturers Record.

WANTED—50 or 60 H. P. Fairbanks Morse & Company old type horizontal gas, gasoline or oil engines. State condition and lowest price. HERMAN SCHAUWECKER & SONS, Parkersburg, W. Va.



SPECIAL ADVERTISEMENTS OF GENERAL INTEREST



Coal Yard and Fuel Oil Business

FOR SALE: The Southern Coal Company, of Asheville, North Carolina, will be sold at public auction on Monday, July 13, 1931. This company was established 22 years ago. Large and well equipped yard doing business of 20,000 tons in 1930 in addition to a lucrative fuel oil business. For particulars communicate with

J. G. Deshler, Receiver
Southern Coal Company Asheville, N. C.

SELL THAT IDLE MACHINERY

Tell our readers about it through

THE RESALE DEPARTMENT

it may just suit the needs of someone.

Ask for rates

MANUFACTURERS RECORD, BALTIMORE, MD.



RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES



IF IT'S NEW PIPE OR SECOND HAND

black or galvanized up to 12"—we have it. Cut and threaded to any length. **SPECIAL:** a carload of 3" or 4". Cheap at any time, rethreaded and coupled.

Your inquiry means—Another satisfied customer.

HUDSON PIPE AND SUPPLY COMPANY

34th Street and C. R. R. of N. J. Bayonne, N. J.

OIL ENGINES

300—20 to 1000 HP to choose from

ZELNICKER IN ST. LOUIS

Tanks, Steel Piling, Rails, Equipment, etc.

Send us your inquiries

Generating Sets, Boilers, etc.

520 HP Busch Sulzer Diesel Oil Engine Direct Coupled to 350 KW Genr.—3 Phase—60 Cycles 220-440-2300 Volts or 125/250 Volts 3 Wire D.C.
2—352 HP Heine Boilers—180 lbs.
50 KVA Westgh. Harrisburg 3/60/220-440-2300 Volts
42 KW G. E. Chuse 125/250 Volts—3 Wire
62 KW G. E. Chuse 125/250 Volts—3 Wire
82 KW G. E. Harrisburg—250 Volts D. C.
100 KW Westgh. Harrisburg 4 Valve—125/250 Volts—3 Wire
110 KW Bullock Chuse 4 Valve—125 Volts D. C.
125 KW Genl. Elect. Ideal—250 Volts D. C.
150 KW Genl. Elect. Erie City—125 Volts D. C.
350 KW Genl. Elect. Sprague D. C. Generator 125/250 Volts—3 Wire—200 RPM.
425 KW Bullock Allis-Chalmers Simple Corliss A. C. Unit 3 Phase—60 Cycles—220-440-2300 Volts
625 KVA. Genl. Elect. Fulton Simple Corliss A. C. Unit 3 Phase—60 Cycles—240/480 Volts.

ARTHUR S. PARTRIDGE

417 Pine Street

ST. LOUIS

8" GALVANIZED CORRUGATED PIPE

6000 ft. 8" NEW GALVANIZED CORRUGATED pipe in lengths 16 to 20 ft. Suitable for exhaust drains, water systems, sewers, conduits, etc. Have the necessary connecting sleeves. Priced considerably under the market.

1000 ft. 12" NAYLOR Black asphalted spiral welded slip joint pipe, slightly used.

MARINE METAL & SUPPLY CO.
167 South St., New York City

PIPE

Rethreaded, reconditioned, guaranteed, suitable for all practical purposes, furnished with new threads and couplings, 400,000 feet in all sizes from 24" to 3/4".

Also large stock of spiral pipe, sizes 7", 10", 12", 14", 20", and 24".

Large stock of valves and fittings, screwed and flanged. Can make attractive prices.

MARINE METAL & SUPPLY CO.
167 South St., New York City

SATISFACTION

ALBERT PIPE SUPPLY CO., INC.

NEW-RECLAIMED-USED

PIPE

ALL SIZES CUT TO SKETCH
AND STOCKED

**BERRY & NORTH 13th STS.
BROOKLYN, N.Y.**

GUARANTEED

SERVICE

PRICES

Second Hand and New **PIPE** Overhauled New Threads and Couplings
Also Cut to Sketch

Greenpoint Iron & Pipe Co., Inc.
187-205 Maspeth Ave. Brooklyn, N. Y.

WANTED

30—32 Band Saw.
30—32 Single Surfacar Round Head
16 in. Jointer.
No. 1 Rip Saw. Yates American.
No. 7 1/2 Cut off Saw. Yates American or similar type.
Single Spinnel Shaper.
State Number, Make, Condition, and Price of machine in first letter.

LOUIS F. DAVISON,
Box 188 Harrisonburg, Va.

PIPE NEW

SECOND HAND
Overhauled and Tested
New Threads and Couplings
Established 1904

**Albert & Davidson
Pipe Corp.**

Second Ave., 50th-51st St., Brooklyn, N. Y.
Telephone Sunset 1900

IRON AND STEEL PIPE

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

CENTRAL PIPE & SUPPLY CO.
Box 1099 Charleston, W. Va.

PIPE FOR EVERY PURPOSE

**JOS. GREENSPON'S SONS
IRON AND STEEL COMPANY**
ST. LOUIS, MO. - TULSA, OKLA. - NEW YORK CITY

1—LANDIS 6" PIPE MACHINE. Very latest type, used only 10 hours, has never had a chaser out of the die head; capacity 2 1/2"—6" with thread indicator and is direct motor drive thru gear box with 7 1/2 H.P., 220 volt, A.C. 3 phase, 60 cycle motor.

1—LANDIS 2" DOUBLE HEAD PIPE AND NIPPLE THREADING MACHINE; capacity 1/4 to 2" with internally tripped die heads is direct motor drive with 3 H.P. A.C. Motor, in very good condition.

1—MURCHEY MODEL E ROLLER PIPE CUTTER, capacity 1/4 to 2" with motor drive; in very good condition.

SMITH ENGINEERING CO.
Washington and Peach Sts.,
Hamburg, Pa.

IDLE MACHINERY

Can be
Disposed of
by
Advertising
it in the

Manufacturers Record
Baltimore, Md.

BOILERS

High pressure water tube and H R T boilers at unbelievable prices.
We have them in practically every southern state and are scrapping all but the very best. Write us your requirements.

W. M. SMITH & CO.
Box 1709 Birmingham, Ala.

STEEL SHEET PILING

NEW and USED

Sold - Bought - Purchased

Stocks at principal points.

HYMAN-MICHAELS COMPANY

St. Louis CHICAGO New York
Houston San Francisco Seattle

— TRANSFORMERS —

SALES AND REPAIR SERVICE

Quick Delivery and Low Prices



A complete stock of transformers 1 to 1000 kva. Modern methods make our repair service second to none. Special service on breakdown jobs.

*All transformers guaranteed for one year.
Write for Catalog. No. 125-E.*

The Electric Service Company, Inc.
"America's Used Transformer Clearing House"
212 Walnut St., Cincinnati, Ohio



NEW STOCK LIST No. 77

Send for your copy
Illustrating and describing
Several Hundred Tools
including

LATHES — DRILLS — GRINDERS
BORING MILLS — PUNCHES —
SHEARS — HAMMERS — MOTORS
GENERATORS — PUMPS —
BOILERS, ETC.

O'BRIEN
Machinery Company
113 N. Third St. Philadelphia



RAILROAD AND CONTRACTORS' EQUIPMENT



Shovels or Cranes

FOR SALE

1—Factory rebuilt Lima 1½ cu. yd. capacity. This machine can be equipped with either shovel, clamshell, dragline or drag shovel attachments. Very reasonably priced. Carries new machine guarantee. Located at Newark.

GENERAL ½-yd. combination shovel, backhoe, 2 buckets, and crane boom. Very good condition, located Long Island.

1—GA-2 Erie Gas Air Shovel. Fine condition and bargain. Located Newark, N. J.

Complete Shovel Attachment for Type "O" Thew. Also, attachment for Type B and B-2 Eries located in New Jersey. Decided bargains.

P & H 1½ yd. Gas Shovel. Excellent condition, very attractive price. Located Newark, N. J.

1—¾ yd. steam Osgood shovel on rubber-tired trucks. In good operating condition. Will sell for practically scrap price.

We have both Steam and Gasoline Excavators ranging from ½ to 1½ cu. yd. capacity in various parts of the country that will be sold at extremely low prices or leased with leased payments made applying on purchase price.

LIMA EXCAVATOR SALES AGENCY

Lima, O., Office: Eastern Offices and Warehouse.
Lima Trust Bldg. 317 Frelinghuysen Ave., Newark, N. J.
Tel. Main 4824 Tel. Waverly 2-0640

Wire or phone nearest office at our expense

36" PORTABLE TRACK

25 lb. rails—7 steel ties per 15 ft. section. Over ten miles, located Ocala, Fla. Also locomotives, cars, cranes and shovels.

Write us or have your local dealer do so.
EQUIPMENT CORPORATION OF AMERICA
1166 So. Washtenaw Ave., Chicago

CARS & LOCOMOTIVES

2—12-ton Plymouth, 36" ga. Gas.
1—8-ton Plymouth, 36" ga. Gas.
1—8-ton Whitecomb, 36" ga. Gas.
30—4 yd. & 5 yd. 36" gauge Dump Cars.

DRAGLINES & PUMPS

1—4 yd. Monighan 110' Boom Diesel.
1—2 yd. Monighan 70' Boom Diesel.
1—1½ yd. Northwest—Gas.
3—10-ton Holt Tractors.
Dragline Buckets, ¾ yd. to 5 yd.
6—2 yd. Lakewood Conc. Dump Buckets.
Gas & Steam Hoists, 75 to 100 H.P.

R. J. Blackburn, Inc.
8245 Idaho Ave. St. Louis, Mo.

RELAYING RAILS—SWITCHES TRACK MATERIAL

THE PERRY BUXTON DOANE CO.
P. O. Box 5253 Boston, Mass.

FOR SALE

P. & H. Model 206, ¾-yd. Dragline.
Byers, 10-ton Caterpillar Crane, ¾-yd. Clam.
O. & S. 22½-ton Loco. Crane 50' Boom.
16—12-yd. Western Steel Beam Dump Cars.
10—50-ton capy. All Steel Twin Hopper Cars.
75-ton, 20x26" 6-Driver Switcher, A. S. M. E.
50-ton, 18x24" 6-Driver Switcher.
92-ton, 20½x28" Mikado (2-8-2) BUILT 1922.
35-ton, 13x20" 4-Driver Sad. Tank.
56-ton, 18x24" 4-Driver Sad. Tank.

WE HAVE OVER FORTY LOCOMOTIVES IN STOCK. REBUILT AND READY ALL TYPES. 10 TO 100 TONS

Southern Iron & Equipment Co.,
Atlanta, Ga.

FOR SALE

1—11"x13" Clyde Reversible Link Motion Swinging Engine, bought brand new, used thirty days.

1—8½x12 W. A. Crook & Bro. Reversible Link Motion Swinging Engine.

1—9x12 W. A. Crook & Bro. Reversible Link Motion Swinging Engine.

1—Set of 14-3/16" Twin Engines built by W. A. Crook & Bro. First class condition.

1—81"x15'9", 150 H.P. Vertical Submerged Tube Boiler, complete, built for 125 lb. steam working pressure. Newly tubed and in first class condition.

T. G. ADAMS MACHINERY CO.
220 W. Bay St., Savannah, Ga.
P. O. Box 1597

RAILS NEW & RELAYING ALL WEIGHTS

Let us know your needs. We may have material in stock near you.

WE BUY RAILS FIT TO RE-LAY
ROBINSON & ORR

Columbia Bldg., 248 Fourth Ave., Pittsburgh, Pa.
New Frogs and Switches at low prices.

50 TONS 100 LB. RELAYING RAILS

150 TONS
80 LB. RELAYING RAILS

HENRY LEVIS & COMPANY
Commercial Trust Bldg. Philadelphia

CONCRETE FINISHING MACHINES

FOR SALE

1—20' Ord late type double screed finishing machine, rebuilt and guaranteed.....\$1250.00
1—18' Ord late type double screed finishing machine, rebuilt and guaranteed.....\$1000.00

R. S. ARMSTRONG & BRO. CO.
ATLANTA, GA.

FOR SALE OR LEASE

We have always on hand for sale or lease, Jordan spreaders, sixteen and twenty yard all-steel air dump cars, Model-75, Lorain gasoline shovel ready for immediate delivery in first class condition.

W. VA. CONSTRUCTION COMPANY
First Huntington National Bk. Bldg., Huntington, W. Va.

OPENED TO TRAFFIC

—in less than half
of specified time
of 48 hours



● Use standard ALPHA CEMENT from your building material dealer for all of your work. Used properly, it will give you the desired results.

Helpful literature on cement construction sent upon request.

When planning the permanent improvement of the main entranceway from the highway to the plant of the Ingersoll-Rand Company, Phillipsburg, N. J., it was imperative to use the new drive as early as possible. In addition to numerous cars, heavily loaded trucks constantly traveled in and out of the plant.

The entranceway had to be opened in not more than 48 hours after the last section of concrete had been poured.

High early strength concrete, made with standard ALPHA PORTLAND CEMENT, was used, with the result that the finished driveway was opened to all traffic 20 hours after completion of the last section of concrete.

ALPHA



PORTLAND CEMENT COMPANY

BATTLE CREEK, MICH.
IRONTON, OHIO

BIRMINGHAM, ALA.
NEW YORK

BOSTON
PHILADELPHIA

CHICAGO
PITTSBURGH

EASTON, PA.
ST. LOUIS

We produce in quantities to meet your requirements

SAND and WASHED GRAVEL

QUICK shipments by rail from Baltimore and North East, Md. or in scow and barge lots. Truck or rail shipments from Baltimore, Md.

The Arundel Corporation

MAIN OFFICE: ARUNDEL BUILDING
BALTIMORE, MARYLAND

Branches: New York, Norfolk and Miami

SAND—GRAVEL—BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.



for economy and permanence in Road Building and General Construction

WOODSTOCK SLAG CORP.

Southern Railway Bldg., Birmingham, Ala.

DUSTDOWN

SETTLES THE DUST PROBLEM

Better and costs less than oil or straight calcium chloride. Unexcelled for gravel and dirt roads, parks, cemeteries, and private driveways.

J. Q. DICKINSON & CO., MALDEN, W. VA.

SAND PUMPS

A wide range of types in sizes 4" to 15"

For belt drive and for direct connection to motor

Illustrated booklet on request

GEORGIA IRON WORKS
AUGUSTA, GA.

Crushed Stone
Mascot Chatts Roofing Gravel
Asphaltic Roadway Gravel
Asphalt Filler Dust



AMERICAN LIMESTONE COMPANY
KNOXVILLE TENNESSEE

**Mr. Contractor--
Mr. Highway Engineer--
You Need This Heater**



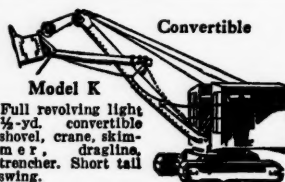
Tested / / Proven / / Reliable

Made by

THE JOS. HONHORST CO.

1016-20 West Sixth St., Cincinnati, Ohio

WRITE FOR INFORMATION



Model K
Full revolving light
1/4-yd. convertible
shovel, crane, skim-
mer, dragline,
trencher. Short tail
swing.

POWER SHOVELS
Cranes, Trenchers
SKIMMERS

Full or part circle

BAY CITY SHOVELS, Inc.
Bay City, Mich.



BUCYRUS
MONIHAN

WALKING
DRAGLINE
EXCAVATORS

SHOVELS
CRANES
DRAGLINES
DREDGES

Reliability!

Bucyrus-Eries are cutting costs in every part of the world. All sizes, types and powers of excavators. Railway cranes and "Load-master."

Bucyrus-Erie Co.
South Milwaukee, Wisconsin

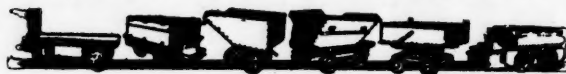


Greater Digging Power
Faster Operation
Longer Life
Guaranteed Against
Breakage



They get
"A Mouthful at Every
Bite" and More Bites
Per Day

INDUSTRIAL CAR EQUIPMENT



THE ATLAS CAR & MANUFACTURING CO.
Cleveland, Ohio



It is to the men already using Buffalo-Springfield Rollers that we direct you for a frank, unbiased opinion of their practical worth. They, of all men, can best explain why the Buffalo-Springfield is, and long has been, the leader among road rollers.

Various models, steam and motor driven. All practical sizes. Scarifier and other attachments when desired. Booklet upon request.

The Buffalo-Springfield Roller Co.
Springfield, Ohio

BUFFALO-SPRINGFIELD

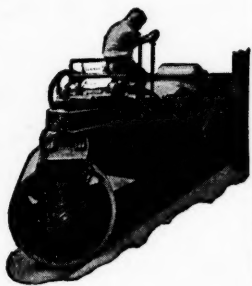
**"No honeycombing—
and a smooth
even pavement"**

Contractors write us that there's no sinking or bridging with an ERIE Roller.

The reason is plain: The ERIE compacts the asphalt uniformly because $\frac{2}{3}$ of the weight of this roller is concentrated over the compression roll.

Roll the job with an ERIE and your margin of profit is larger. Write today for Bulletin "M."

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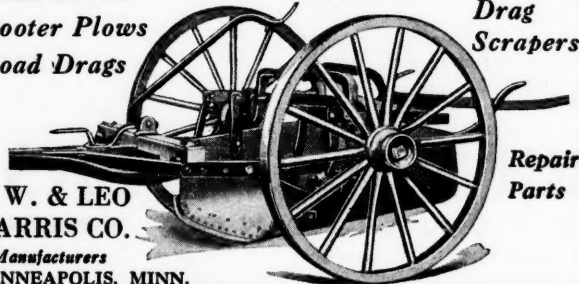
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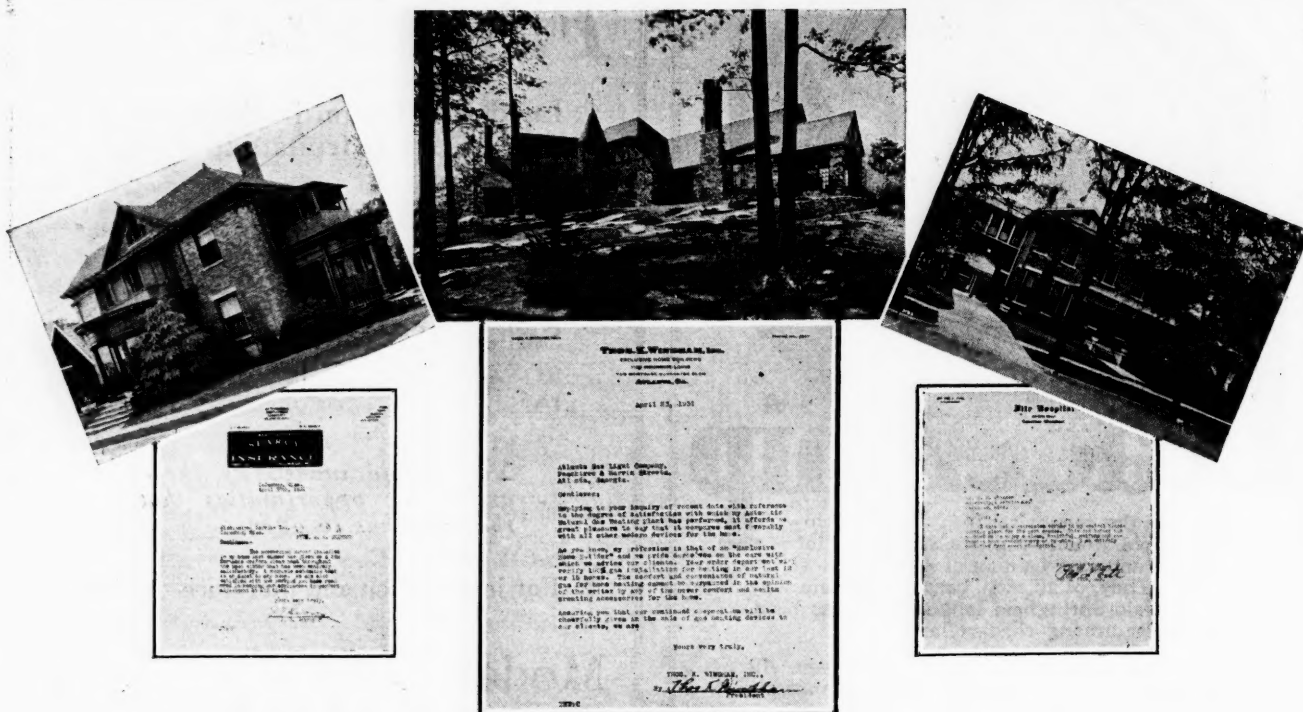
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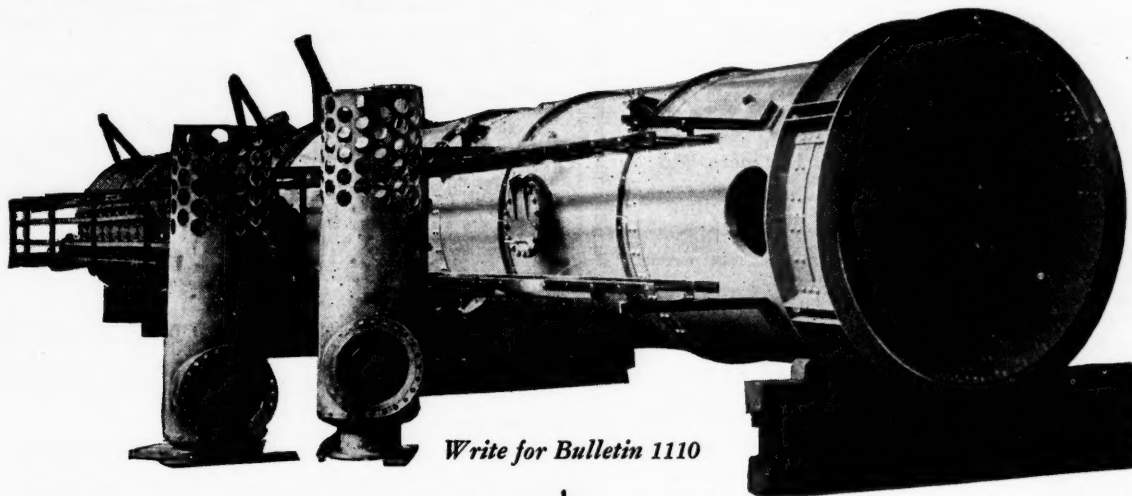
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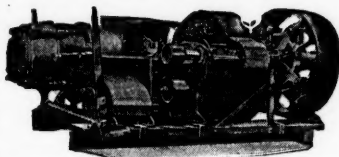
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 Cowper Co., Inc., John W., Richmond, Va.
 Fiske-Carter Constr. Co., Greenville, S. C.
 Lockwood Greene Engrs., Inc., Boston.
 Smallman-MacQueen Construction Co., Birmingham.
 Snare Corp., Frederick, New York, N. Y.
 Thompson & Bros., T. C., Charlotte, N. C.
 Tucker & Laxton, Charlotte, N. C.
 Virginia Engineering Co., Inc., Newport News, Va.
 White Engineering Corp., J. G., New York.

—Mill Village.
 Hornbuckle Contracting Co., Atlanta, Ga.

—(Power Piping.)
 Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
 Poe Piping & Heating Co., Greenville, S. C.

—(Power Plants.)
 Snare Corp., Frederick, New York, N. Y.
 Virginia Engineering Co., Inc., Newport News, Va.

—(Railroad.)
 Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)
 Blair, Algernon, Montgomery, Ala.
 Cement Gun Construction Co., Chicago.
 Gunite Cons. & Constr. Co., Kansas City.
 Tucker & Laxton, Charlotte, N. C.

—(Road and Street Paving.)
 Fiske-Carter Constr. Co., Greenville, S. C.
 Gridley Constr. Co., Lee A., Knoxville, Tenn.
 Hornbuckle Contracting Co., Atlanta, Ga.
 McCrary Co., J. B., Atlanta, Ga.
 Virginia Engineering Co., Inc., Newport News, Va.

—(Sewerage and Waterworks.)
 Gridley Constr. Co., Lee A., Knoxville, Tenn.
 Hardaway Contracting Co., Columbus, Ga.
 Hornbuckle Contracting Co., Atlanta, Ga.
 McCrary Co., The J. B., Atlanta, Ga.
 Snare Corp., Frederick, New York, N. Y.
 Tucker & Laxton, Charlotte, N. C.
 Virginia Engineering Co., Inc., Newport News, Va.

—(Sprinkler System.)
 Poe Piping & Heating Co., Greenville, S. C.

—Machinery and Supplies.
 (Used.)
 Adams Mch. Co., T. G., Savannah, Ga.
 Lima Excavator Sales Agency, Lima, Ohio.
 Marine Metal & Supply Co., New York.

CONTRACT WORK WANTED.
 (See following classifications.)
 Boiler and Tank Work.
 Castings.
 Forgings.
 Foundries and Machine Shops.
 Machinery (Special).
 Ornamental Iron Work.
 Patterns.
 Sheet Metal Work.
 Structural Steel and Iron.
 Welding Plants.

CONVEYING AND ELEVATING MACHINERY.
 Barber-Greene Co., Aurora, Ill.
 Fairfield Engr. Co., Marion, Ohio.
 Universal Crusher Co., Cedar Rapids, Ia.

CONVEYORS (Portable, Power-Driven.)
 Clark Tractor Co., Battle Creek, Mich.
 Fairfield Engr. Co., Marion, Ohio.

COOLING AND HEATING UNITS (Fan.)
 Niagara Blower Co., New York, N. Y.

COTTON GIN MACHINERY.
 Continental Gin Co., Birmingham, Ala.

COUPLINGS.
 Golden's Pdy. & Mch. Co., Columbus, Ga.

—(Flexible.)
 Diamond Chain & Mfg. Co., Indianapolis, Ind.

CRANES
 Industrial Brownhoist Corp., Cleveland, O.
 National Equipment Co. (Inley, Koehring, Parsons), Milwaukee, Wis.

Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Cantilever, Gantry.)
 Bedford Foundry & Machine Co., Bedford, Ind.

—(Crawler.)
 Harnischfeger Corp., Milwaukee, Wis.
 Industrial Brownhoist Corp., Cleveland, O.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Crawling Tractor.)
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Electric Traveling.)
 Bedford Foundry & Machine Co., Bedford, Ind.
 Harnischfeger Corp., Milwaukee, Wis.

—(Full Circle Steam and Electric.)
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Gasoline.)
 Harnischfeger Corp., Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Locomotive.)
 Bucyrus-Erie Co., So. Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.

—(Material Handling.)
 Bay City Shovels, Inc., Bay City, Mich.
 Industrial Brownhoist Corp., Cleveland, O.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.
 Universal Crane Co., Lorain, Ohio.

—(Traveling Hand Power.)
 Wright Mfg. Co., Bridgeport, Conn.

CRAWLERS (Tractor.)
 Trackson Co., Milwaukee, Wis.

CREOSOTED MATERIALS.
 Amer. Creosote Wks., Inc., New Orleans.
 Atlantic Creosoting Co., Norfolk, Va.

CREOSOTED TIMBER.
 Ayer & Lord Tie Co., Chicago, Ill.
 Brown Wood Preserving Co., Louisville, Ky.

CREOSOTE OIL.
 Amer. Creosote Wks., Inc., New Orleans.
 Ayer & Lord Tie Co., Inc., Chicago.

CREOSOTING (Wood Material.)
 Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Atlantic Creosoting Co., Norfolk, Va.
 Brown Wood Preserving Co., Louisville, Ky.
 Eppinger & Russell Co., New York, N. Y.
 Gulf States Creos. Co., Hattiesburg, Miss.

CROSS-ARMS (Creosoted.)
 Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Atlantic Creosoting Co., Norfolk, Va.

—(Zinc Meta Arsenite Treated.)
 Curtin-Howe Corp., New York, N. Y.

CROSS-TIES (Creosoted.)
 Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Atlantic Creosoting Co., Norfolk, Va.
 Ayer & Lord Tie Co., Inc., Chicago.
 Eppinger & Russell Co., New York, N. Y.

—(Zinc Meta Arsenite Treated.)
 Curtin-Howe Corp., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)
 American Limestone Co., Knoxville, Tenn.
 Bortley & Co., W. W., Roanoke, Va.

CRUSHERS (Coal and Coke.)
 Fuller Lehigh Co., Fullerton, Pa.
 Steward Machine Co., Chas. C., Birmingham, Ala.

—(Rock.)
 Diamond Iron Works, Minneapolis, Minn.
 Universal Crusher Co., Cedar Rapids, Ia.

CRUSHING and Pulverizing Machinery.
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.

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LOUISVILLE, KY.

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LOUISVILLE, KY.

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Cast Iron Pipe Research Assn., Chicago.
National Cast Iron Pipe Co., Birmingham.
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Truscon Steel Co., Youngstown, Ohio.

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National Tube Co., Pittsburgh, Pa.

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Alco Products, Inc., New York, N. Y.

DAMP-PROOFING.

Headley Emulsified Products Co., Philadelphia, Pa.

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Andrews Co., A. H., Chicago, Ill.

DITCHING MACHINERY.

Barber-Greene Co., Aurora, Ill.
Bay City Shovels, Inc., Bay City, Mich.
Harnischfeger Corp., Milwaukee, Wis.
Industrial Brownhoist Corp., Cleveland, O.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DOORS (Bronze.)

Michals Art Bronze Co., Covington, Ky.

—(Fire.)

Merchant & Evans Co., Philadelphia, Pa.

—(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

—(Revolving.)

Michals Art Bronze Co., Covington, Ky.

—(Rolling, Steel and Wood.)

Wilson Corp., The J. G., New York.

—(Steel.)

Truscon Steel Co., Youngstown, Ohio.

—(Vault.)

York Safe & Lock Co., York, Penna.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Bucyrus-Erie Co., So. Milwaukee, Wis.
Harnischfeger Corp., Milwaukee, Wis.
National Equipment Corp. (Koeberling, Inc.), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Thew Shovel Co., The, Lorain, Ohio.

DREDGES (Dipper, Elevator, Hydraulic.)

Bay City Shovels, Inc., Bay City, Mich.
Bucyrus-Erie Co., So. Milwaukee, Wis.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

DRILLING CONTRACTORS.

Kennedy-Biegler Drilling Co., New York City.
Mott Core Drilling Co., Huntington, W. Va.
Myers & Sons, J. L., Denton, Texas.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Southern Drilling Co., Saltville, Va.
Sprague & Hanwood, Inc., Scranton, Pa.

DRILLS (Oil and Artesian Well)

Virginia Machinery & Well Co., Inc., Richmond, Va.

DRINKING FOUNTAINS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

DROP-FORGING MACHINERY.

Bliss Co., E. W., Brooklyn, N. Y.

DRYERS (Gravel and Sand.)

Ripley Fdy. & Mch. Co., Ripley, Ohio.

DRYING MACHINERY.

Chicago Bridge & Iron Wks., Birmingham.

DUSTPROOFING (Concrete.)

Sonneborn Sons, Inc., L., New York.

DYNAMITE (Industrial and Agricultural.)

Du Pont De Nemours & Co., Inc., E. I., Wilmington, Del.

ECONOMIZERS (Fuel.)

Babcock & Wilcox Co., New York.

ECONOMISTS (Administrative.)

Brooklyn Economic Service, New York City.

ELECTRICAL Instruments and Supplies.

General Electric Co., Schenectady, N. Y.
Western Electric Co., New York City.

—Machinery (Generators, Motors, etc., New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Partridge, Arthur S., St. Louis, Mo.
Rockford Power Machy. Co., Rockford, Ill.
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

—Machinery (Generators, Motors, etc., Used.)

Delta Equipment Co., Philadelphia, Pa.
Electric Service Co., Cincinnati, Ohio.
General Electric Co., Schenectady, N. Y.
O'Brien Machinery Co., The, Phila., Pa.
Bandle Machinery Co., The, Cincinnati, O.
Rockford Power Machy. Co., Rockford, Ill.

—Machinery Repairing (Motors, Generators, etc.)

Electric Service Co., Cincinnati, Ohio.

ELECTRIC LIGHTING.

Westinghouse Lamp Co., New York City.

ELECTRIC SHOVELS (See Shovels.)

ELEVATORS (Electric.)

American Elevator & Machine Co., Inc., Louisville, Ky.
Millner Co., St. Louis, Mo.

—(Hand and Belt Power.)

American Elevator & Machine Co., Inc., Louisville, Ky.
Millner Co., St. Louis, Mo.

—(Hydraulic.)

American Elevator & Machine Co., Inc., Louisville, Ky.

ENGINEERS (Airports.)

Lockwood Greene Engrs., Inc., New York.
MacElwee & Crandall, Inc., Cambridge, Mass.
Shaw Co., Russell B., St. Louis, Mo.

—(Appraisal.)

Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
May, Inc., Geo. S., Chicago, Ill.

Sanderson & Porter, New York, N. Y.
Wadleigh & Bailey, Washington, D. C.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman and Singleton, Inc., Atlanta.

—(Aviation.)

Shaw Co., Russell B., St. Louis, Mo.

—(Bridge.)

Freeland, Roberts & Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Hardaway Contracting Co., Columbus, Ga.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Southern Erectors, Inc., Tampa, Fla.
Steel & Lobby, Knoxville, Tenn.
Turner, C. A. P., Minneapolis, Minn.
Virginia Bridge & Iron Co., Roanoke, Va.
Wheeler, Walter H., Minneapolis, Minn.
Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

—(Chemical.)

Barrow-Agee Laboratories, Memphis, Tenn.
Dow & Smith, New York, N. Y.
Moss, Jr., W. Wade, Columbus, Ga.
Picard Laboratories, Birmingham, Ala.
Pittsburgh Testing Laboratories, Pittsburgh, Pa.

—(Civil.)

Charlton & Davis, Ft. Lauderdale, Fla.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Harub Engr. Co., C. N., Nashville, Tenn.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Hills & Youngberg, Jacksonville, Fla.
Huey, S. E., Monroe, La.
MacElwee & Crandall, Inc., Cambridge, Mass.
Main, Inc., Chas. T., Boston, Mass.
Steel & Lobby, Knoxville, Tenn.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

—(Consulting.)

Barstow & Co., W. S., New York City.
Charlton & Davis, Ft. Lauderdale, Fla.
Converse & Co., J. B., Mobile, Ala.
Cramer, Robert, Milwaukee, Wis.
Engineering Service Corp., Houston, Tex.
Goder, Joseph, Chicago, Ill.
Harnischfeger Corp., New York, N. Y.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Smith, Elroy G., Augusta, Ga.
Stillman & Van Biele, New York, N. Y.
United Engineers & Constructors, Phila.
Wadleigh & Bailey, Washington, D. C.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

—(Cost.)

Ernst & Ernst, New York, N. Y.
May, Inc., Geo. S., Chicago, Ill.

—(Dams.)

Alpaugh & Sons, Chas. W., Manassas, Va.
Barstow & Co., W. S., New York City.
Byllesby Engineering & Management Corp., Chicago, Ill.
Gardner & Howe, Memphis, Tenn.
Hardaway Contracting Co., Columbus, Ga.
Harnischfeger Corp., New York, N. Y.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Lee, William S., Charlotte, N. C.
Main, Inc., Chas. T., Boston, Mass.
Sirtine & Co., J. E., Greenville, S. C.
Tucker & Lorton, Charlotte, N. C.
Wheeler, Walter H., Minneapolis, Minn.
White Engineering Corp., J. G., New York.
Wiley & Wilson, Lynchburg, Va.

—(Drainage and Irrigation.)

Cramer, Robert, Milwaukee, Wis.
Hills & Youngberg, Jacksonville, Fla.
Huey, S. E., Monroe, La.

—(Efficiency.)

Ernst & Ernst, New York, N. Y.
Whitman, Requaardt & Smith, Balto., Md.

—(Electrical.)

Engineering Service Corp., Houston, Tex.
Hoosier Engineering Co., Chicago, Ill.
Lee, William S., Charlotte, N. C.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Sanderson & Porter, New York, N. Y.
Tucker & Lorton, Charlotte, N. C.
Webb Electric Co., Anderson, S. C.
White Co., Gilbert C., Durham, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Electric-Light and Power Plants.)

Barstow & Co., W. S., New York City.
Byllesby Engineering & Management Corp., Chicago, Ill.
Cramer, Robert, Milwaukee, Wis.
Lee, William S., Charlotte, N. C.
Main, Inc., Chas. T., Boston, Mass.
Sanderson & Porter, New York, N. Y.
Scotfield Engineering Co., Philadelphia.
Tucker & Lorton, Charlotte, N. C.

White Engineering Corp., J. G., New York.
White Co., Gilbert C., Durham, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Flood Control.)

Harns Engineering Co., Chicago.

—(Gas.)

Byllesby Engineering and Management Corp., Chicago, Ill.
Huey, S. E., Monroe, La.

—(Geological.)

De Kalb, Courtenay, New York City.
Froehling & Robertson, Richmond, Va.
Moss, Jr., W. Wade, Columbus, Ga.
Wadleigh & Bailey, Washington, D. C.

—(Harbor Improvements.)

Engineering Service Corp., Houston, Tex.

—(Heating.)

Wiley & Wilson, Lynchburg, Va.

—(Hydraulic.)

Alpaugh & Sons, Chas. W., Manassas, Va.
Harns Engineering Co., Chicago.
Main, Inc., Chas. T., Boston, Mass.
Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

—(Hydro-electric.)

Alpaugh & Sons, Chas. W., Manassas, Va.
Barstow & Co., W. S., New York City.
Byllesby Engineering & Management Corp., Chicago, Ill.
Harns Engineering Co., Chicago.
Lee, William S., Charlotte, N. C.
Main, Inc., Chas. T., Boston, Mass.
Sanderson & Porter, New York, N. Y.
Scotfield Engineering Co., Philadelphia.
Sirtine & Co., J. E., Greenville, S. C.
Tucker & Lorton, Charlotte, N. C.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

—(Ice and Refrigerating.)

Engineering Service Corp., Houston, Tex.

—(Industrial Plants.)

Barstow & Co., W. S., New York City.
Conover, Older & Quinlan, Inc., Chicago.
Converse & Co., J. B., Mobile, Ala.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Hills & Youngberg, Jacksonville, Fla.
Lockwood Greene Engrs., Inc., New York.
MacElwee & Crandall, Inc., Cambridge, Mass.
Main, Inc., Chas. T., Boston, Mass.
Preacher & Co., Inc., G. Lloyd, Atlanta.
Sanderson & Porter, New York, N. Y.
Scotfield Engineering Co., Philadelphia.
Sirtine & Co., J. E., Greenville, S. C.
Smith, Elroy G., Augusta, Ga.
Turner, C. A. P., Minneapolis, Minn.
United Engineers & Constructors, Phila.
Wiley & Wilson, Lynchburg, Va.

—(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.
Lockwood Greene Engrs., Inc., New York.
Wadleigh & Bailey, Washington, D. C.

—(Inspection and Tests.)

Barrow-Agee Laboratories, Memphis, Tenn.
Conard, William R., Burlington, N. J.
Cramer, Robert, Milwaukee, Wis.
Dow & Smith, New York, N. Y.
Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
Moss, Jr., W. Wade, Columbus, Ga.
Picard Laboratories, Birmingham, Ala.
Pittsburgh Testing Laboratories, Pittsburgh, Pa.
Southwestern Laboratories, Ft. Worth, Tex.

—(Lighting.)

Byllesby Engineering & Management Corp., Chicago, Ill.
Westinghouse Lamp Co., New York City.
Wiley & Wilson, Lynchburg, Va.

—(Mechanical.)

Charlton & Davis, Ft. Lauderdale, Fla.
Engineering Service Corp., Houston, Tex.
Lee, William S., Charlotte, N. C.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Meigs, Bassett & Slaughter, Phila., Pa.
Sanderson & Porter, New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

—(Mining. See Engineers, Geological.)

—(Municipal.)

Conover, Older & Quinlan, Inc., Chicago.
Dow & Smith, New York, N. Y.
Harub Engr. Co., C. N., Nashville, Tenn.
Hills & Youngberg, Jacksonville, Fla.
Huey, S. E., Monroe, La.
Knowles, Inc., Morris, Pittsburgh, Pa.
McCrory Co., The, J. B., Atlanta, Ga.
White Co., Gilbert C., Durham, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Paving and Roads.)

Dow & Smith, New York, N. Y.
Freeland, Roberts & Co., Nashville, Tenn.

Harrub Engr. Co., C. N., Nashville, Tenn.
White Co., Gilbert C., Durham, N. C.

—(Printing and Newspaper Plants.)

Lockwood Greene Engrs., Inc., New York.

—Production.

Scofield Engineering Co., Philadelphia.

—(Public Service Properties.)

Barstow & Co., W. S., New York City.
Bylesby Engineering & Management Corp., Chicago, Ill.
Knowles, Inc., Morris, Pittsburgh, Pa.
Main, Inc., Chas. T., Boston, Mass.
Sanderson & Porter, New York, N. Y.
Scofield Engineering Co., Philadelphia.
White Engineering Corp., J. G., New York.

—(Railroad.)

Huey, S. E., Monroe, La.

—(Reinforced Concrete Bridges, Buildings, etc.)

Freeland, Roberts & Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Steel & Leiby, Knoxville, Tenn.
Tucker & Laxton, Charlotte, N. C.
Turner, C. A. P., Minneapolis, Minn.
Wheeler, Walter H., Minneapolis, Minn.

—(Sales Analysis.)

May, Inc., Geo. S., Chicago, Ill.

—(Sanitary.)

Cramer, Robert, Milwaukee, Wis.
Harza Engineering Co., Chicago.
Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

—(Sewage Disposal Plants.)

Cramer, Robert, Milwaukee, Wis.
McCrory Co., The, J. B., Atlanta, Ga.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

—(Sewerage and Waterworks.)

Conard, William R., Burlington, N. J.
Consoer, Older & Quinlan, Inc., Chicago.
Hardaway Contracting Co., Columbus, Ga.
Harrub Engr. Co., C. N., Nashville, Tenn.
Hills & Youngberg, Jacksonville, Fla.
Knowles, Inc., Morris, Pittsburgh, Pa.
Sanderson & Porter, New York, N. Y.
Tucker & Laxton, Charlotte, N. C.
White Co., Gilbert C., Durham, N. C.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

—(Structural.)

Freeland, Roberts & Co., Nashville, Tenn.
Hedrick, Inc., Ira G., Hot Springs Nat'l Park, Ark.
Hills & Youngberg, Jacksonville, Fla.
Huey, S. E., Monroe, La.
Lockwood Greene Engrs., Inc., New York.
Southern Erectors, Inc., Tampa, Fla.
Turner, C. A. P., Minneapolis, Minn.
United Engineers & Constructors, Phila.
Virginia Bridge & Iron Co., Roanoke, Va.
Whitman, Requaardt & Smith, Balto., Md.

—(Textile Mills.)

Lockwood Greene, Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Sirrins & Co., J. E., Greenville, S. C.

—(Transmission Lines.)

Hoosier Engineering Co., Chicago, Ill.

—(Ventilating and Heating.)

Wiley & Wilson, Lynchburg, Va.

—(Water Supply.)

Whitman, Requaardt & Smith, Balto., Md.
Wiley & Wilson, Lynchburg, Va.

ENGINES (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

—(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Gas and Gasoline.)

Sterling Engine Co., Buffalo, N. Y.

—(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Oil.)

Continental Gin Co., Birmingham, Ala.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Leonard Iron Works & Supply Co., Augusta, Ga.
Schofield's Sons Co., J. S., Macon, Ga.

ENVELOPES.

Young & Selden Co., Baltimore, Md.

ESTIMATORS (Building & Construction.)

Martin, Joe B., Charlotte, N. C.

EXCAVATING MACHINERY.

Bay City Shovels, Inc., Bay City, Mich.
Bucyrus-Erie Co., So., Milwaukee, Wis.
Harnischfeger Corp., Milwaukee, Wis.
Industrial Brownhoist Corp., Cleveland.
National Equipment Corp. (Kochrins Insley, Parsons), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Thew Shovel Co., The, Lorain, Ohio.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Thew Shovel Co., Lorain, Ohio.

—(Dragline. See Dragline Excavators.)

—(Trench.)

Barber-Greene Co., Aurora, Ill.
Bay City Shovels, Inc., Bay City, Mich.
Bucyrus-Erie Co., So., Milwaukee, Wis.
Harnischfeger Corp., Milwaukee, Wis.
Ohio Power Shovel Co., Lima, Ohio.

EXPANSION JOINTS (Road and Street.)

Carey Co., Philip, Lockland, Cincinnati, Ohio.

EXPLOSIVES.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

FACTORY Management Systems.

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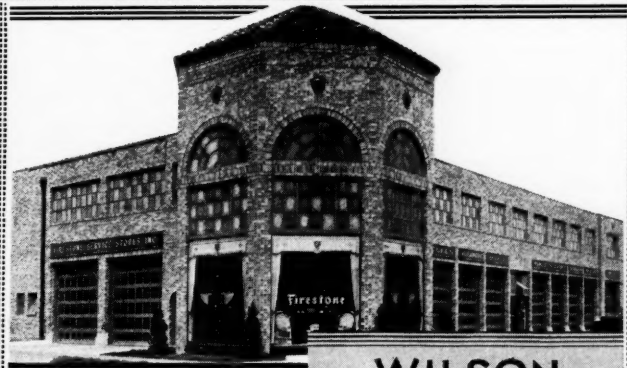
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Fuller Lehigh Co., Fullerton, Pa.

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Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
Fairbanks, Morse & Co., Chicago, Ill.
Myers & Bro. Co., The F. E., Ashland, O.
National Equipment Corp., (C. H. & E. Division), Milwaukee, Wis.
Petersburg Mchry. Pump & Well Co., Petersburg, Va.
Virginia Mchry. & Well Co., Richmond, Va.

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—(Boiler Feed.)

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DeLaval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Wks., Medina, N. Y.
Manistee Iron Works Co., Manistee, Mich.
Myers & Bro. Co., The F. E., Ashland, O.

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DeLaval Steam Turbine Co., Trenton, N. J.
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Jaeger Machine Co., Columbus, Ohio.
La Bour Co., Elkhart, Ind.
Layne & Bowler, Inc., Memphis, Tenn.
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—(Deep Well.)

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—(Power.)

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—(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)

Erie Pump & Engine Wks., Medina, N. Y.
Georgia Iron Works, Augusta, Ga.

—(Steam.)

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
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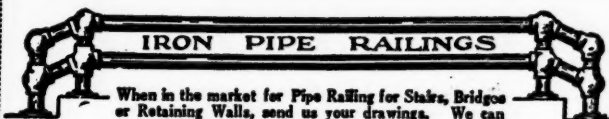
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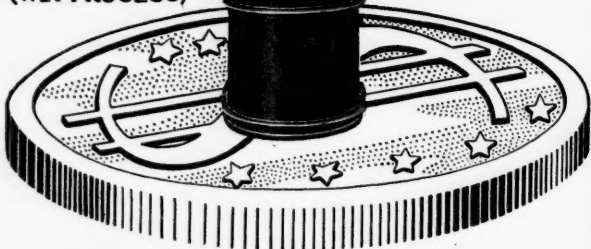
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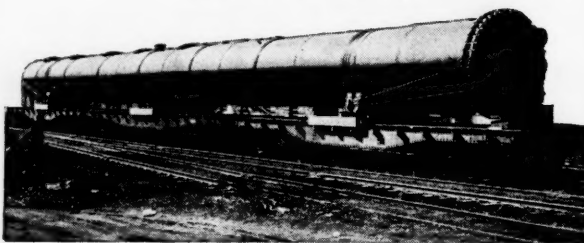
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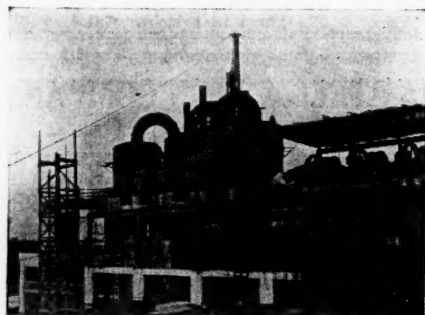
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Air-Tight Steel Tank Co., Pittsburgh, Pa.
Titusville Iron Works Co., Titusville, Pa.

—(Elevated Steel.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chat-
tanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., R. D., Newnan, Ga.
Pittsburgh-Des Moines Steel Co., Pitts-
burgh, Pa.
Schedels Sons Co., J. S., Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Elevated Wood.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.

—(Iron and Steel.)
Air-Tight Steel Tank Co., Pittsburgh, Pa.
American Bridge Co., New York, N. Y.
Birmingham Tank Co., Birmingham, Ala.
Chattanooga Boiler & Tank Co., Chat-
tanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., R. D., Newnan, Ga.
Downingtown Iron Works, Downingtown, Pa.
Finnigan Co., Inc., J. J., Atlanta, Ga.
Lancaster Iron Works, Inc., Lancaster, Pa.
Lombard Iron Works & Supply Co., Au-
gusta, Ga.
McClintic-Marshall Co., Pittsburgh, Pa.
Pittsburgh-Des Moines Steel Co., Pitts-
burgh, Pa.
Schedels Sons Co., J. S., Macon, Ga.
Titusville Iron Works Co., Titusville, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
Westinghouse Traction Brake Co., Wil-
merding, Pa.

—Mixing.
Alco Products, Inc., New York, N. Y.

—(Pressure.)
Air-Tight Steel Tank Co., Pittsburgh, Pa.
Newport News Shipbuilding & Dry Dock
Co., Newport News, Va.

—(Seamless Steel.)
Air-Tight Steel Tank Co., Pittsburgh, Pa.
National Tube Co., Pittsburgh, Pa.

—(Storage, Oil, etc.)
Biggs Boiler Works, Akron, Ohio.
Birmingham Boiler & Engr. Co., Bir-
mingham, Ala.
Chattanooga Boiler & Tank Co., Chat-
tanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Downingtown Iron Works, Downingtown, Pa.
Ingalls Iron Works Co., Birmingham, Ala.
Pittsburgh-Des Moines Steel Co., Pitts-
burgh, Pa.
Titusville Iron Works Co., Titusville, Pa.
United Welding Co., Middletown, O.

—(Welded.)
Welded Products Co. of La., Inc., New
Orleans, La.

—(Wood.)
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Davis & Son, G. M., Palatka, Fla.
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American Creosoting Co., Louisville, Ky.

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—(Cork Composition.)
Congoleum-Nairn, Inc., Kearny, N. J.

—(Cork Flooring.)
Congoleum-Nairn, Inc., Kearny, N. J.
United Cork Companies, Lyndhurst, N. J.

—(Floor.)
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—(Roof.)
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Amer. Creosoting Co., Inc., Louisville, Ky.

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—(Steel and Wood.)
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tanooga, Tenn.
Cole Mfg. Co., R. D., Newnan, Ga.

TRACK (Portable or Permanent.)
Equipment Corp. of America, Chicago, Ill.
Sweet's Steel Co., Williamsport, Pa.

TRACTORS (Industrial.)
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Caterpillar Tractor Co., Peoria, Ill.
Clark Tractor Co., Battle Creek, Mich.
International Harvester Co. of America,
Inc., Chicago, Ill.

—(Road.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Caterpillar Tractor Co., Peoria, Ill.

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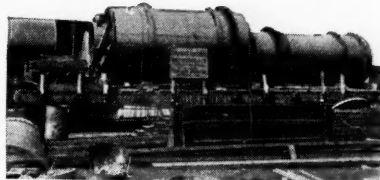
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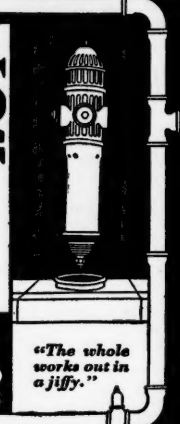
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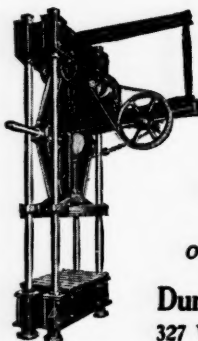
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Advs. marked ‡ appear in first issue of month.
Advs. marked * appear every other week.

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11-6-30

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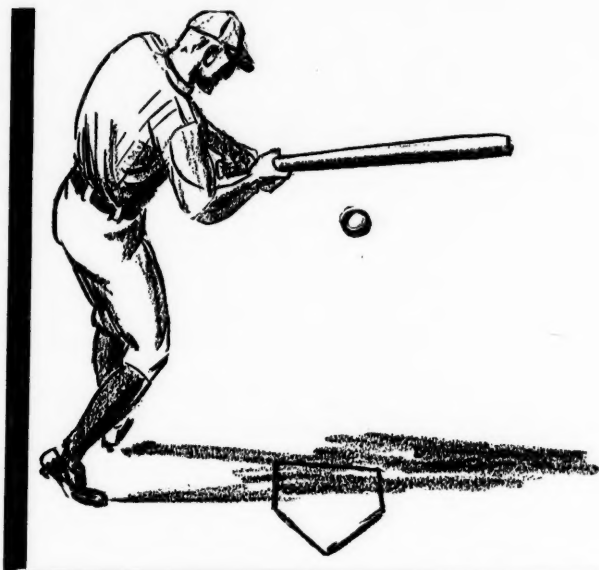
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